

# SOMATOM DEFINITION AS 20/40/64/128/OPEN



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Typical Drawing #: 08006

**SIEMENS**  
**SIEMENS MEDICAL SOLUTIONS**  
51 Valley Stream Parkway  
Malvern, PA 19355  
[www.usa.siemens.com/medical](http://www.usa.siemens.com/medical)

TYPICAL DRAWING

SOMATOM DEFINITION AS 20/40/64/128/OPEN •

SIEMENS

ARCHITECTURAL EQUIPMENT PLAN

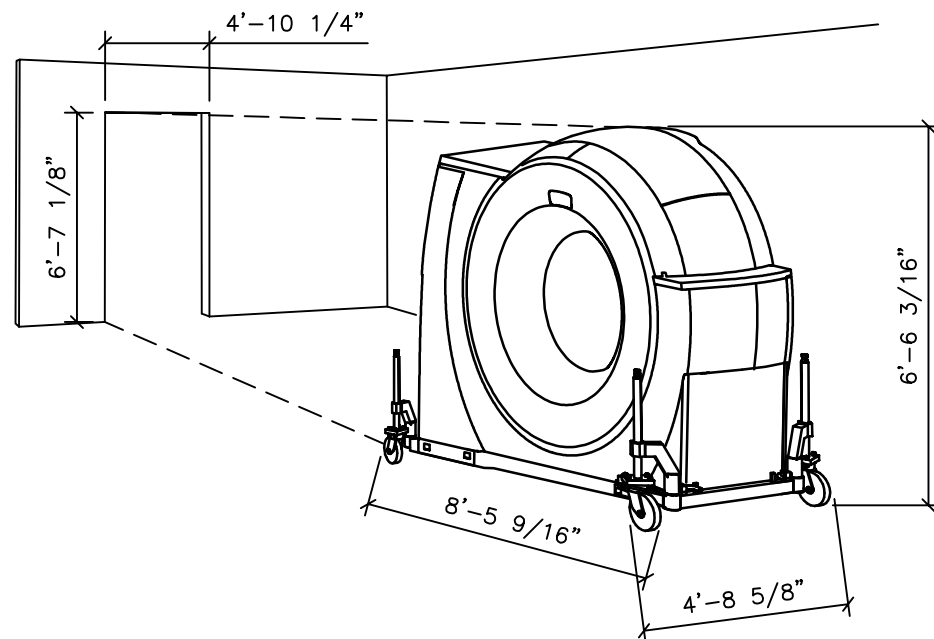
ROOM MEASUREMENTS

ALL ROOM MEASUREMENTS AND ROOM DETAIL SPECIFICATIONS MUST BE VERIFIED ON SITE PRIOR TO BEGINNING ANY CONSTRUCTION WORK.

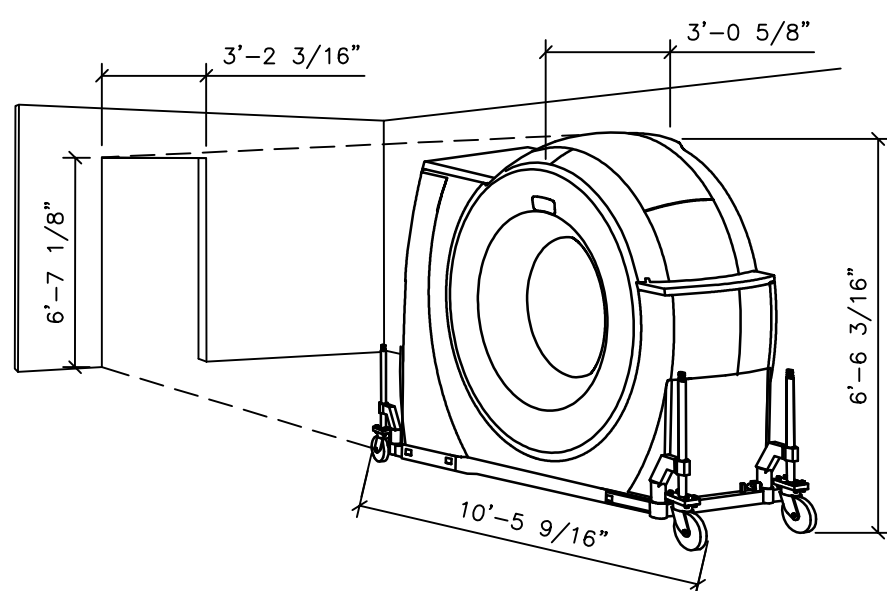
TRANSPORT AND DELIVERY NOTES

TOTAL GANTRY TRANSPORT WEIGHT: 5,267 LBS.  
GANTRY WITHOUT TRANSPORT DEVICE: 4,850 LBS.  
TRANSPORT DEVICE: 417 LBS.

**NORMAL TRANSPORT REQUIREMENTS:**  
DURING THE MOVEMENT OF THE GANTRY THROUGH CORRIDORS THE TRANSPORT CASTERS ARE SWIVELED OUT FOR STABILITY AS SHOWN BELOW. THE MAXIMUM WIDTH IS 4'-8 5/8" AND THE MAX. LENGTH IS 8'-5 9/16" WHEN CASTERS ARE SWIVELED OUT.



**NARROW SPACE TRANSPORT REQUIREMENTS:**  
WHEN TRANSPORTING THE GANTRY THROUGH A NARROW SPACE OR DOORWAY, THE TRANSPORT CASTERS ARE SWIVELED IN AS SHOWN BELOW. THE MAXIMUM WIDTH IS 3'-0 5/8" AND MAXIMUM LENGTH 10'-5 9/16".



ENVIRONMENTAL/POWER AUDIT

AS AN INDICATION OF OUR COMMITMENT TO QUALITY, SIEMENS MAY, AT NO COST TO YOUR FACILITY, CHECK THE OPERATING ENVIRONMENT AFTER SYSTEM TURNOVER TO DETERMINE IF THE REQUIREMENTS FOR TEMPERATURE, HUMIDITY, POWER, AND GROUNDING ARE MET AS PER SIEMENS' PUBLISHED SPECIFICATIONS. SIEMENS WILL GENERATE A WRITTEN REPORT DETAILING THE ENVIRONMENTAL AND ELECTRICAL CONDITION OF THE SITE AFTER TURNOVER AND WILL SHARE THE REPORT WITH YOU. IN THE EVENT WE IDENTIFY ANY ENVIRONMENTAL/POWER DEFICIENCIES AT THE SITE, YOUR FACILITY WILL BE REQUESTED TO CORRECT DEFICIENCIES WITHIN THIRTY (30) DAYS. SHOULD ANY CORRECTIVE ACTIONS BE NECESSARY, AND UPON REQUEST, SIEMENS WILL PROVIDE GUIDANCE IN AN EFFORT TO FACILITATE RESOLUTION. PLEASE BE ADVISED THAT AFTER 30 DAYS NOTICE ANY REPAIR OR MAINTENANCE SERVICES NECESSITATED BY SEVERE DEFICIENCIES WILL FALL OUTSIDE YOUR WARRANTY COVERAGE.

PLANNING REQUIREMENTS

EMERGENCY POWER OFF (EPO) BUTTONS REQUIRED IN CONTROL AREA, EXAMINATION ROOM AND EQUIPMENT AREA.

DOOR (SAFETY) SWITCH REQUIRED ON ALL DOORS ACCESSING THE EXAMINATION ROOM IN ACCORDANCE WITH LOCAL CODES.

CASEWORK & ACCESSORY NOTES

- ALL CASEWORK IS EITHER EXISTING OR IS TO BE DESIGNED, DETAILED, FURNISHED AND INSTALLED BY THE CUSTOMER AND/OR CONTRACTOR. FOLLOW DESIGN RECOMMENDATIONS INCLUDED HEREWITH, AS THEY ARE ESSENTIAL FOR THE SUCCESSFUL INSTALLATION & OPERATION OF THE SIEMENS EQUIPMENT.
- ALL FURNITURE (CHAIRS, ETC.) FOR THE CONTROL ROOM ARE TO BE PROVIDED BY THE CUSTOMER.

FINISHED ROOM HEIGHT

FOR CT GANTRY ONLY	MINIMUM 7'-6 9/16"
CAREVISION MONITOR/CEILING MOUNT	MIN. 8'-7 1/2" MAX. 11'-2 5/8"

EQUIPMENT LEGEND

NO	DESCRIPTION	SMS SYM	WEIGHT (LBS)	BTU/HR TO AIR	DIMENSIONS (INCHES)			REMARKS
					W	D	H	
1	CONTROL CONSOLE W/KEYBOARD AND CONTROL BOX	17	75	---	47 1/4	31 1/2	28 3/8	
2	19" FLAT SCREEN MONITOR ICS	18	20	256	16 9/16	8 1/4	16 1/16	ON CONSOLE/COUNTER
3	POWER CONNECTION TERMINAL - ICS	19	---	---	13 9/16	2 15/16	5 11/16	WALL MOUNTED
4	DVI SPLITTER - ICS	20	---	---	15 3/4	3 15/16	11 13/16	MOUNTED ON THE CONSOLE/CONTAINER
5	SYNGO ACQUISITION WORKPLACE	21	<66	1,706	9 13/16	29 1/2	18 1/2	OFF FLOOR/IN CONTAINER
6	IMAGE EVALUATION KEYBOARD (OPTION)	22	---	---	---	---	---	ON CUSTOMER'S COUNTER
7	19" FLAT SCREEN MONITOR FOR IES (OPTION)	23	20	256	16 9/16	8 1/4	16 1/16	ON CONSOLE/COUNTER
8	SYNGO CT WORKPLACE (OPTION)	24	<66	1,706	9 13/16	29 1/2	18 1/2	OFF FLOOR/IN CONTAINER
9	UPS FOR IES (OPTION)	25	36	171	9 3/16	16 7/16	5 13/16	
10	POWER CONNECTION TERMINAL - IES (OPTION)	26	---	---	---	---	---	WALL MOUNTED
11	CONTAINER & CONTAINER TABLE FOR ICS/IES (OPTION)	27	55	---	31 1/2	31 1/2	28 3/8	HOUSING FOR ICS/IES
12	SOMATOM DEFINITION AS GANTRY	28	4,850	3,412*	93 11/16	36 5/8	78	*ADDITIONAL HEAT DISSIPATED TO WATER
13	SOMATOM DEFINITION AS GANTRY	29	4,850	40,946*	93 11/16	36 5/8	78	* AIR COOLED GANTRY
14	PATIENT TABLE (OPTION)	30	1,103	1,024	29 1/2	95 11/16	33 7/16	2000mm TABLE
15	POWER DISTRIBUTION CABINET & UPS	31	1,373	6,824	35 7/16	27 1/4	76 3/4	UPS LOCATED INSIDE OF PDC
16	IMAGE RECONSTRUCTION SYSTEM - IRSMX3D	32	106	5,122	12 1/4	30 3/4	19 5/8	
17	HEAT EXCHANGER CABINET - WATER/AIR SPLIT (OPTION)	33	772	3,412	35 1/4	26 15/16	78 9/16	
18	OUTDOOR UNIT - WATER/AIR SPLIT (OPTION)	34	397	129,662	95 1/2	43 1/4	40 3/16	
19	CARE VISION DUAL MONITOR (OPTION)	35	157	512	---	---	---	CEILING MOUNTED
20	EATON SURGE PROTECTIVE DEVICE PANEL (OEM-OPTION)	36	13.5	---	7 1/2	6 11/16	12	WALL MOUNTED
21	MEDRAD M25CT222DF DISPLAY CONTROL UNIT (OEM-OPTION)	37	8	---	12 1/2	9	13 1/2	HEIGHT WITH SCREEN UP
22	MEDRAD M25CT222DF BASE UNIT (OEM-OPTION)	38	14	---	11	8 3/4	11 1/2	UNDER COUNTER ON SHELF
23	CEILING MOUNTED MEDRAD INJECTOR (OEM-OPTION)	39	106	---	---	---	---	SEE MFG SPECIFICATIONS
24	LAP LASER SYSTEM PC (OEM-OPTION)	40	---	---	0	0	0	SEE MFG SPECIFICATIONS
25	LAP SIDE WALL LASER (2) (OEM-OPTION)	41	58 EA.	---	7 1/4	7 1/4	55	SEE MFG SPECIFICATIONS
26	LAP CEILING LASER (OEM-OPTION)	42	58	---	7 1/4	7 1/4	55	SEE MFG SPECIFICATIONS
27	MULTIMODALITY WORKPLACE COMPUTER (OPTION)	43	55	---	19 3/4	10	23 5/8	ON CUSTOMER'S COUNTER
28	MULTIMODALITY WORKPLACE KEYBOARD AND MONITOR (OPTION)	44	---	---	---	---	---	ON CUSTOMER'S COUNTER
29	LASER CAMERA (OEM-OPTION)	45	---	---	---	---	---	SEE MFG SPECIFICATIONS

NOISE LEVEL

SYSTEM COMPONENT	DECIBEL LEVEL (AT 3'-3" DISTANCE)
GANTRY	<68
PATIENT TABLE	<60
PDC CABINET	≤55
IRSmx2C TOWER (40/64 SLICE CONFIG.)	50 TO 55 (1)
IRSmx2b TOWER (128 SLICE CONFIG.)	<55
HEAT EXCHANGER - WATER/AIR SPLIT	<65

1) NOISE DEPENDS ON THE ROOM TEMPERATURE AND THE PROCESSOR LOAD.

STATE AGENCY REVIEW

PRIOR TO SIEMENS EQUIPMENT INSTALLATION, APPROVAL OF CONSTRUCTION OR STRUCTURAL MODIFICATIONS UTILIZING X-RAY FOR DIAGNOSTIC OR THERAPEUTIC PURPOSES, MUST BE OBTAINED BY THE CUSTOMER FROM THE APPROPRIATE STATE AGENCY, IF APPLICABLE.

ARCHITECTURAL NOTES

- ALL PRELIMINARY EQUIPMENT LAYOUTS SUBMITTED BY SIEMENS MEDICAL SOLUTIONS, INC. (SMS HEREAFTER) ARE BASED ON THE RECOMMENDED SPACE NECESSARY FOR THE OPERATION AND SERVICEABILITY OF THE EQUIPMENT BEING PROPOSED. SMS WILL NOT SUBMIT AN EQUIPMENT LAYOUT THAT IS NOT IN THE BEST INTEREST OF BOTH THE CUSTOMER AND SMS. ALL EQUIPMENT LAYOUTS ARE BASED EITHER ON AN ACTUAL SITE LOCATION SURVEY OR ARCHITECTURAL DRAWINGS SUPPLIED TO SMS. SMS WILL NOT BE RESPONSIBLE FOR ANY ALTERATIONS THAT ENCROACH WITHIN DESIGNATED SAFETY AND SERVICE CLEARANCE ZONES AS INDICATED ON DRAWINGS (IE. PIPE CHASES, VENTILATION DUCTS, CASEWORK, AND SOFFITS, ETC.) MADE BY THE CUSTOMER OR REQUIRED BY A CUSTOMER'S ARCHITECTURAL FIRM ONCE PRELIMINARY DRAWINGS HAVE BEEN SUBMITTED AND APPROVED. DO NOT ALTER ANY SPECIFICATIONS AND/OR DIMENSIONS WITHOUT CONTACTING AND RECEIVING WRITTEN CONFIRMATION FROM SMS PROJECT MANAGER.
- SMS IS NOT AN ARCHITECTURAL OR ENGINEERING FIRM. DRAWINGS SUPPLIED BY SMS ARE NOT CONSTRUCTION DRAWINGS. THEREFORE, THESE DRAWINGS ARE TO BE USED ONLY FOR INFORMATION TO COMPLEMENT ACTUAL CONSTRUCTION DRAWINGS AVAILABLE FROM A CUSTOMER APPOINTED ARCHITECTURAL REPRESENTATIVE OR A CUSTOMER'S ENGINEERING DESIGN GROUP. SMS REQUIRES THAT ONCE THE FINAL CONSTRUCTION DRAWINGS HAVE BEEN PREPARED, THEY SHALL BE MADE AVAILABLE TO SMS PROJECT MANAGER TO VERIFY THAT ALL SMS REQUIREMENTS HAVE BEEN ADHERED TO. THE CUSTOMER'S ARCHITECT AND GENERAL CONTRACTOR SHALL BE ULTIMATELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CODES AND PROFESSIONAL DESIGN REQUIREMENTS.
- THE CUSTOMER IS RESPONSIBLE FOR ALL ROOM AND AREA PREPARATION COSTS, PROFESSIONAL FEES, PERMITS, REPORTS, AND INSPECTION FEES.
- EQUIPMENT WARRANTIES, EXPRESSED OR IMPLIED ON THE PART OF SMS SHALL BE CONTINGENT UPON STRICT COMPLIANCE WITH THE ARCHITECTURAL, STRUCTURAL, ELECTRICAL, MECHANICAL AND RECOMMENDATIONS AND REQUIREMENTS CONTAINED IN THESE DRAWINGS, UNLESS SPECIFIED OTHERWISE.
- ALL DIMENSIONS SHOWN ARE TAKEN FROM FINISHED SURFACES UNLESS SPECIFIED OTHERWISE.
- THIS DRAWING DOES NOT PROVIDE RADIATION SHIELDING REQUIREMENTS FOR X-RAY AND ASSOCIATED EQUIPMENT. THE CUSTOMER IS RESPONSIBLE FOR CONSULTING WITH A REGISTERED RADIATION PHYSICIST. ACTUAL PROTECTION REQUIREMENTS SHALL BE SPECIFIED BY A REGISTERED RADIATION PHYSICIST AT CUSTOMER'S ENGAGEMENT AND EXPENSE. RESPONSIBILITY FOR ALL INFORMATION AS TO THE ROOM LOCATION, USE, AND NUMBER OF ANTICIPATED EXAMINATIONS TO BE PERFORMED PER TIME PERIOD SHALL BE PROVIDED TO THE PHYSICIST BY THE CUSTOMER. THE CUSTOMER SHALL FURTHER TAKE ALL RESPONSIBILITY IN THE COMMUNICATION AND COORDINATION OF ACTIVITIES OF THE RADIATION PHYSICIST AND THE ARCHITECTURAL REPRESENTATIVE.
- SMS SHALL BE RESPONSIBLE FOR SMS EQUIPMENT INSTALLATION AND CALIBRATION, CONNECTION AND INSTALLATION OF SMS PROVIDED CABLES, AND CONNECTION OF CONTRACTOR PROVIDED WIRES TO SMS EQUIPMENT. IN THE EVENT THAT SPECIFIC TRADE RULES OR LICENSE REQUIREMENTS PROHIBIT THIS, THE CUSTOMER SHALL INITIATE THE SERVICES OF APPROVED OTHER CONTRACTORS AND PAY FOR SELECTED APPROVED PARTIES TO PERFORM THIS WORK WITH JOB SUPERVISION TO BE PROVIDED BY SMS. CALIBRATION WHEN ACCOMPLISHED OUTSIDE OF NORMAL INSTALLATION SEQUENCES DUE TO CONTRACTOR OR TRADE RULE ACTIONS OR REQUIREMENTS SHALL BE SUPPORTED BY, CHARGED TO, AND ACCEPTED BY THE CUSTOMER AS AN ADDITIONAL INSTALLATION EXPENSE.
- THE CUSTOMER SHALL VERIFY WITH SMS PROJECT MANAGER FINAL INSTALLATION DRAWINGS THE LOCATIONS AND TRAVEL OF ALL ANCILLARY EQUIPMENT TO BE CEILING OR WALL MOUNTED (IE. O.R. LIGHTS, MEDICAL GAS COLUMNS, PHYSIOLOGICAL MONITORING INJECTORS, CRT PLATFORMS, SPRINKLER HEADS, SMOKE DETECTORS, ELECTRICAL OUTLETS, HVAC GRILLES, SPEAKERS, AND GENERAL ROOM LIGHTING, ETC.).
- THE GENERAL CONTRACTOR/CUSTOMER SHALL BE RESPONSIBLE FOR ALL FINAL PAINT, TOUCH-UP AND ANY COSMETIC OR TRIM WORK WHICH NEEDS TO BE OR IS REQUIRED TO BE COMPLETED AFTER THE INSTALLATION OF THE SMS EQUIPMENT AND ANY ASSOCIATED SUPPORT APPARATUS.

SITE READINESS GUIDELINES

- THE FOLLOWING GENERAL CONDITIONS ARE NECESSARY TO HAVE THE STATUS OF "READY SITE":
- PROPER POWER AVAILABLE AT SIEMENS EQUIPMENT POWER CABINET LOCATION AND ALL POWER OUTLETS FUNCTIONING.
  - AIR CONDITIONING/HUMIDIFICATION SYSTEMS COMPLETE, TESTED, AND FUNCTIONING PROPERLY ACCORDING TO SIEMENS SPECIFICATIONS.
  - PROPER LIGHTING INSTALLED AND FUNCTIONING.
  - PLUMBING COMPLETE EXCEPT FOR ANY FINAL CONNECTIONS TO SIEMENS EQUIPMENT.
  - ALL CABLE TRAYS/DUCTS/CONDUITS CORRECTLY SIZED, LOCATED, AND INSTALLED ACCORDING TO THE SIEMENS DRAWINGS.
  - ALL REINFORCEMENT PLATES/UNISTRUT INSTALLED AS REQUIRED.
  - ROOM FOR EQUIPMENT INSTALLATION AND IMMEDIATE VICINITY IS DUST-FREE AND IS TO REMAIN SO FOR THE DURATION OF THE INSTALLATION.
  - A SECURE AREA (APPROXIMATELY 10' x 10') IS AVAILABLE AT EQUIPMENT DELIVERY FOR PARTS AND INSTALLATION TOOLS.
  - CUSTOMER SUPPLIED CAMERAS AND PROCESSORS INSTALLED.
  - CUSTOMER APPROVAL FOR SIEMENS REMOTE SERVICES (SRS) CONNECTION, AND CUSTOMER'S I.T. CONTACT INFORMATION AND IP ADDRESSES ESTABLISHED.
  - WALLS TO BE PRIMED AND PAINTED, FLOORS TO BE TILED EXCEPT IN AREAS OF THE EQUIPMENT BASE PLATES.

IF THESE CONDITIONS ARE NOT MET, THE SIEMENS PROJECT MANAGER AND THE DESIGNATED SIEMENS INSTALLATION SUPERVISOR SHALL RESCHEDULE THE INSTALLATION START DATE. NOTE: ADDITIONAL COST MAY BE INCURRED BY THE CUSTOMER/CONTRACTOR AND DELIVERY DATES MAY NEED TO BE RESCHEDULED, WHEN THE SIEMENS SITE READINESS GUIDELINES ARE NOT MET.

RESOURCE LIST (SMS USE ONLY)

DESIGNATION	PG NUMBER	DATE
SOMATOM DEFINITION AS	C2-029.891.01.15.02	05.11
COMMON CT	CT00-000.891.02.08.02	02.11
COMMON CT OPTIONS	CT00-000.891.03.09.02	02.11

DEFINITION AS  
06/09/11

ATTENTION:

— THIS DRAWING IS DESIGNED TO CONFORM TO FEATURES AND EQUIPMENT REQUIREMENTS PRESENTED AT THE TIME OF THEIR PREPARATION. SINCE BOTH THESE FACTORS ARE SUBJECT TO DESIGN MODIFICATION, THEY ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES.  
— THIS SET OF PLANS REPRESENTS A COMPLETE SET OF DETAILS AND SHOULD NOT BE SEPARATED.

— IT IS RECOMMENDED THAT THE SIEMENS DRAWINGS BE INCORPORATED WITH THE CONSTRUCTION DOCUMENTS FOR REFERENCE.

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SYM	DATE	DESCRIPTION
△		
—ISSUE BLOCK—		

SIEMENS

SOMATOM DEFINITION AS 20/40/64/128

TYPICAL DRAWING

PROJECT #:

08006

SHEET:

A-101

THE USE OR REPRODUCTION OF THIS TITLE BLOCK WITHOUT SIEMENS' AUTHORIZATION WILL RESULT IN PROSECUTION UNDER FULL EXTENT OF THE LAW.

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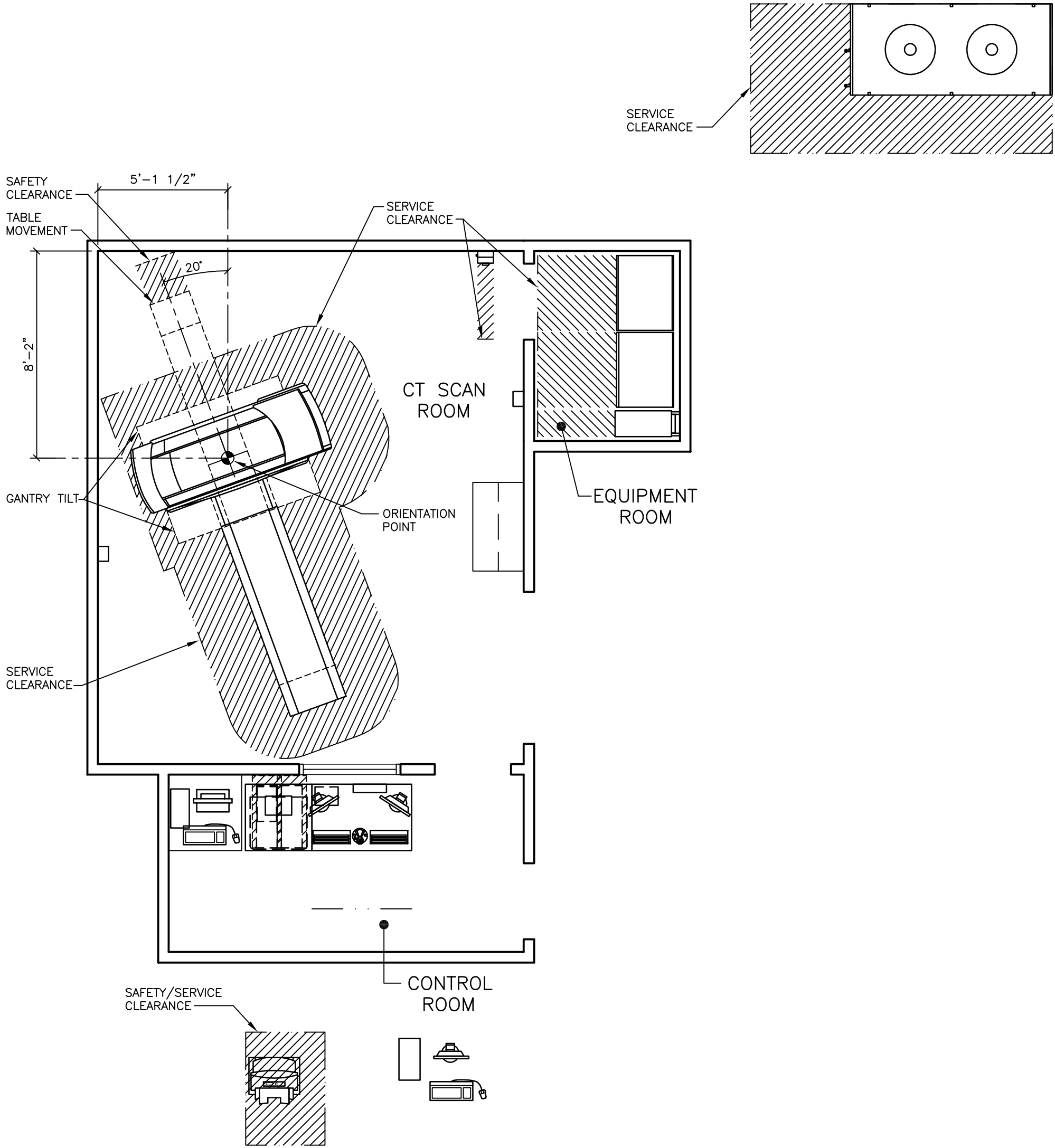
SCALE: AS NOTED

REF. #:

DATE: 06/09/11

CHECKED:

DRAWN BY: L. BROBJORG



SAFETY/SERVICE CLEARANCE PLAN

SCALE: 1/4" = 1'-0"

SIEMENS REMOTE SERVICES (SRS)

TO ENSURE THE UPTIME OF YOUR SYSTEM DURING THE WARRANTY PERIOD (AND BEYOND WITH A SERVICE AGREEMENT), SIEMENS REMOTE SERVICES (SRS) REQUIRES REMOTE LOCAL AREA NETWORK ACCESS TO SIEMENS SYSTEMS.

SRS REQUIRES ONE OF THE FOLLOWING CONNECTION METHODS:

(PREFERRED) VPN CONNECTION

THE PREFERRED CONNECTION METHOD IS (VPN) VIRTUAL PRIVATE NETWORK (WHERE THE CUSTOMER HAS AVAILABLE A VPN CAPABLE FIREWALL OR OTHER VPN APPLIANCE). THIS METHOD PROVIDES THE POSSIBILITY FOR REMOTE SYSTEM DIAGNOSTICS WITHOUT ADDITIONAL HARDWARE. PLEASE CONTACT SIEMENS REMOTE SERVICES (800-888-SIEM) TO DETERMINE IF THIS METHOD IS SUITABLE FOR YOUR SITE.

(OPTIONAL) SRS ROUTER CONNECTION

THE SRS ROUTER IS SUPPLIED BY SIEMENS AND INSTALLED AT THE CUSTOMER'S SITE, WHILE STILL REMAINING THE PROPERTY OF SIEMENS. THE CUSTOMER'S NETWORK ADMINISTRATOR AND SIEMENS REMOTE SERVICES SHALL DETERMINE THE TYPE AND LOCATION OF THE SRS ROUTER REQUIRED.

THE SRS ROUTER IS CONNECTED TO AN ANALOG MODEM THAT IS SUPPLIED BY SIEMENS, WHICH THEN IN TURN IS CONNECTED TO AN ANALOG PHONE LINE THAT IS SUPPLIED BY THE CUSTOMER. ONE SRS ROUTER ALLOWS REMOTE DIAGNOSTICS TO MULTIPLE MEDICAL SYSTEMS.

THE SRS ROUTER SHOULD BE INSTALLED IN A SECURE LOCATION (CUSTOMER'S NETWORK COMPUTER ROOM) THAT HAS LIMITED ACCESS. IT CAN BE LOCATED ON A SHELF, TABLE, OR IN A CABINET. THE CONNECTION CABLES (WITH INDICATED LENGTHS BELOW) ARE INCLUDED WITH DELIVERY.

SRS ROUTER CONNECTION DIAGRAM

CUSTOMER NETWORK OR SWITCH\*

3'-3"

1

2

4'-11"

110 V

3

2'-7"

3'-3"

4

4'-11"

110 V

NOTE: ALL POWER OUTLETS ARE SUPPLIED/INSTALLED BY CUSTOMER.

1

ETHERNET SWITCH OR HUB, SUPPLIED BY CUSTOMER

2

SRS ROUTER, SUPPLIED BY SIEMENS (SIZE: 11.2"W X 8.7"D X 5.5"H, WEIGHT: 2 LBS.)

3

ANALOG MODEM, SUPPLIED BY SIEMENS

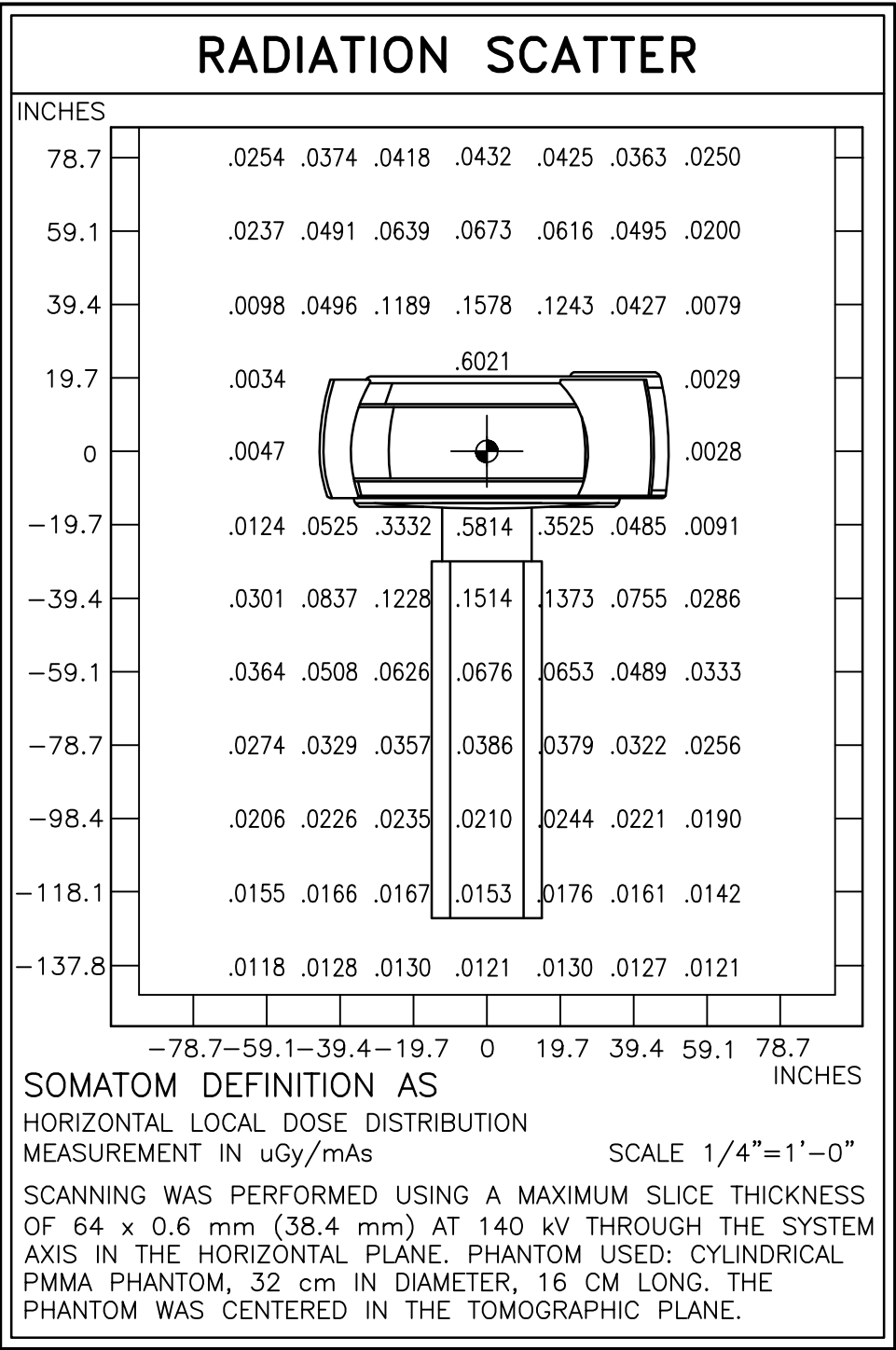
4

ANALOG PHONE LINE, SUPPLIED BY CUSTOMER

\* OPTIONAL SWITCH AND CABLES ARE NOT INCLUDED, BUT CAN BE ORDERED FROM SIEMENS.

SIEMENS REMOTE SERVICE

SCALE: NONE



FINISHED ROOM HEIGHT	
FOR CT GANTRY ONLY	MINIMUM 7'-6 9/16"
CAREVISION MONITOR/CEILING MOUNT	MIN. 8'-7 1/2" MAX. 11'-2 5/8"

ATTENTION:

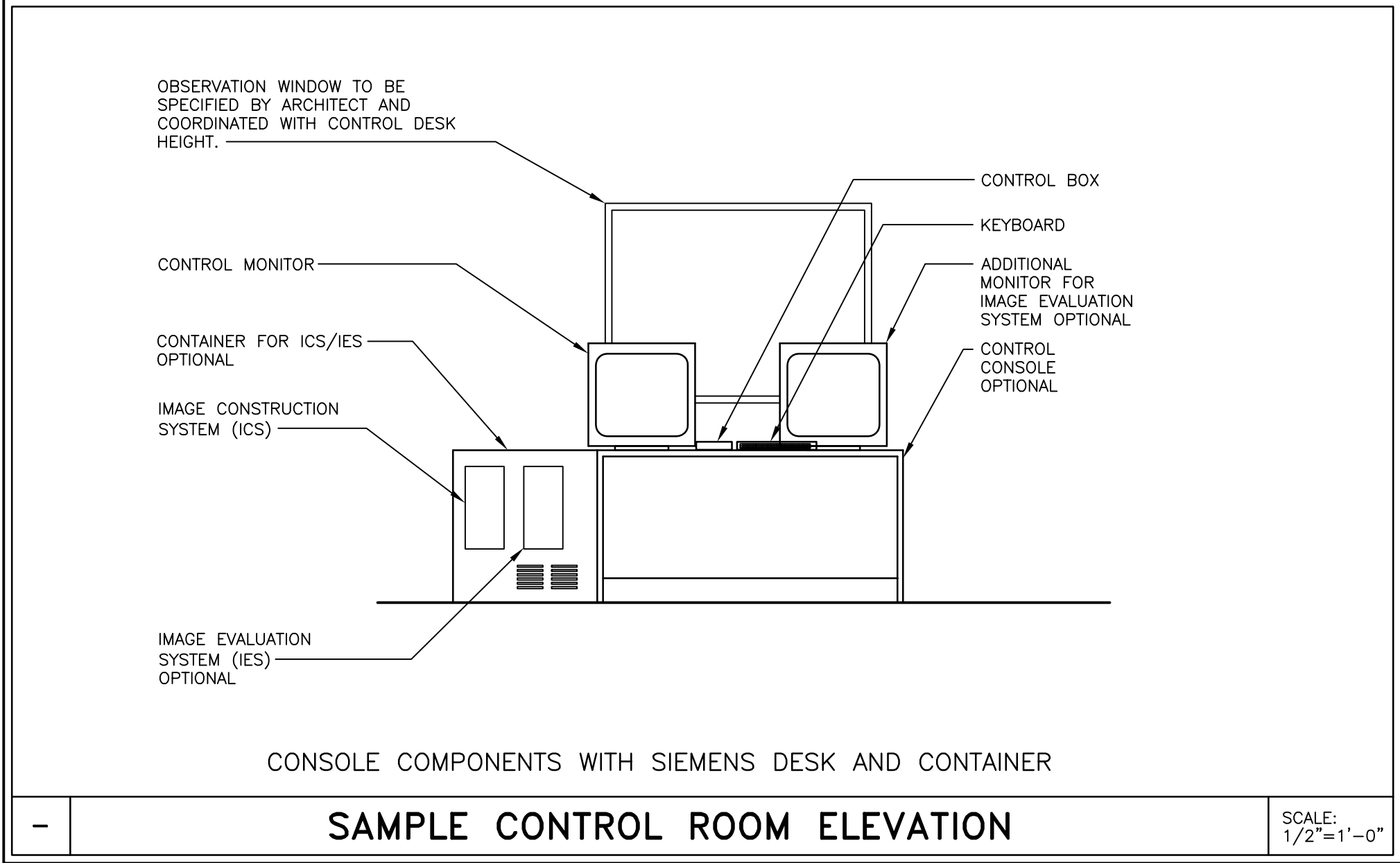
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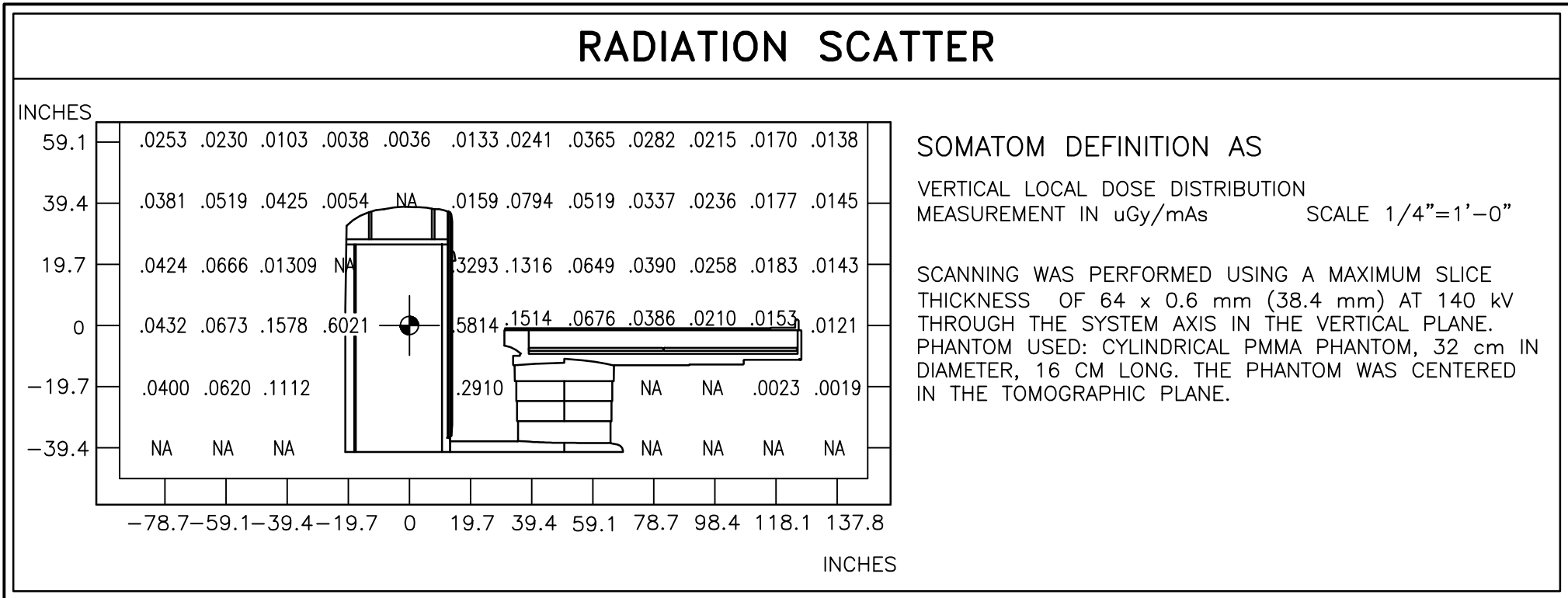
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SAMPLE CONTROL ROOM ELEVATION

SCALE: 1/2"=1'-0"



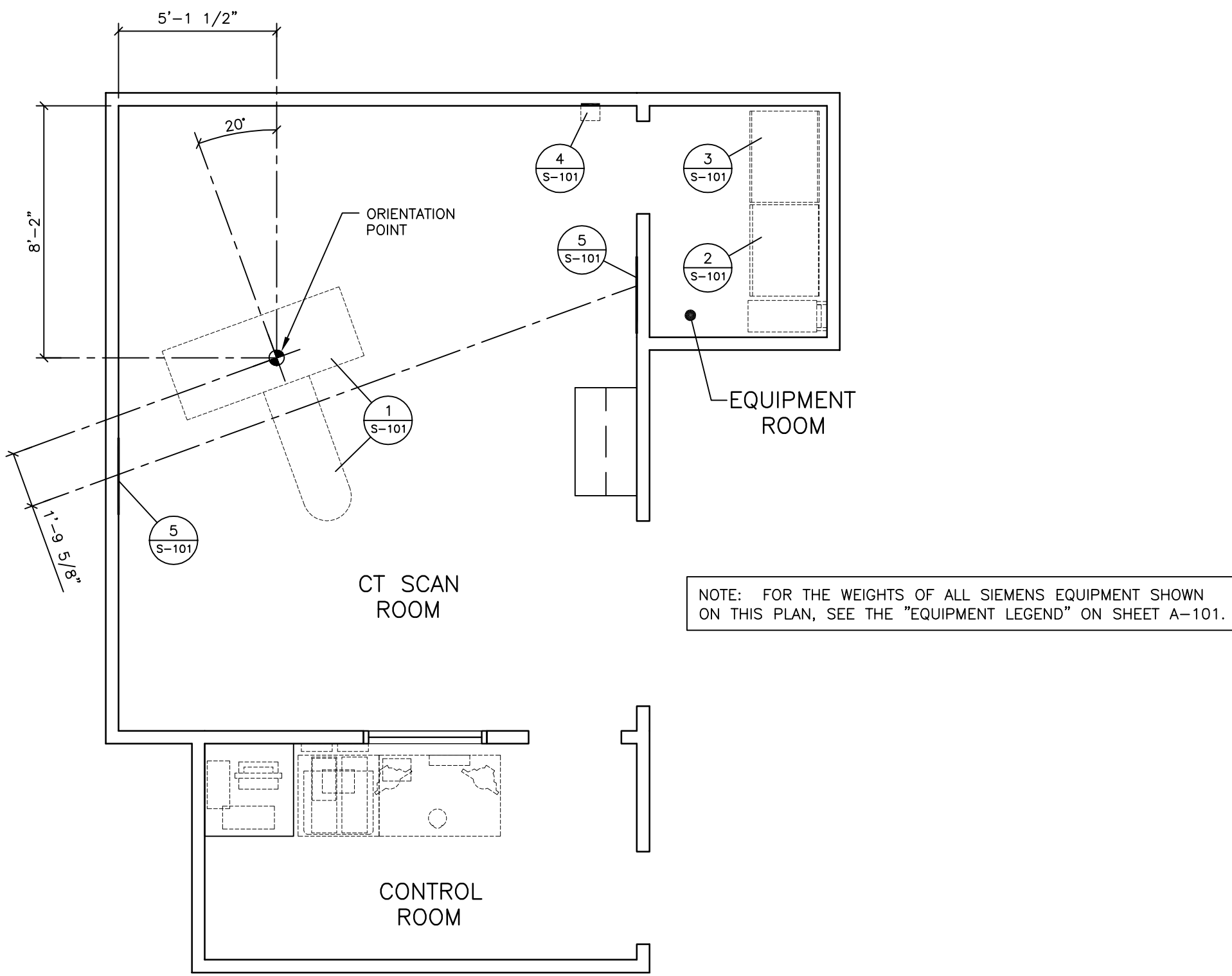
SAFETY CLEARANCE NOTE

IF THE SAFETY DISTANCES ARE NOT OBSERVED, SAFETY MEASURES IN ACCORDANCE WITH LOCAL CODES SHOULD BE UTILIZED (FOR EXAMPLE BARRIERS, WARNING SIGNS, AND SAFETY MATS).

DEFINITION AS  
06/09/11

SIEMENS		
SOMATOM DEFINITION AS 20/40/64/128		
TYPICAL DRAWING		
THE USE OR REPRODUCTION OF THIS TITLE BLOCK WITHOUT SIEMENS AUTHORIZATION WILL RESULT IN PROSECUTION UNDER FULL EXTENT OF THE LAW.		PROJECT #: <b>08006</b>
ALL RIGHTS ARE RESERVED.		SHEET: <b>A-102</b>
SCALE: AS NOTED	REF. #:	DRAWN BY: L. BROBJORG
DATE: 06/09/11		CHECKED:

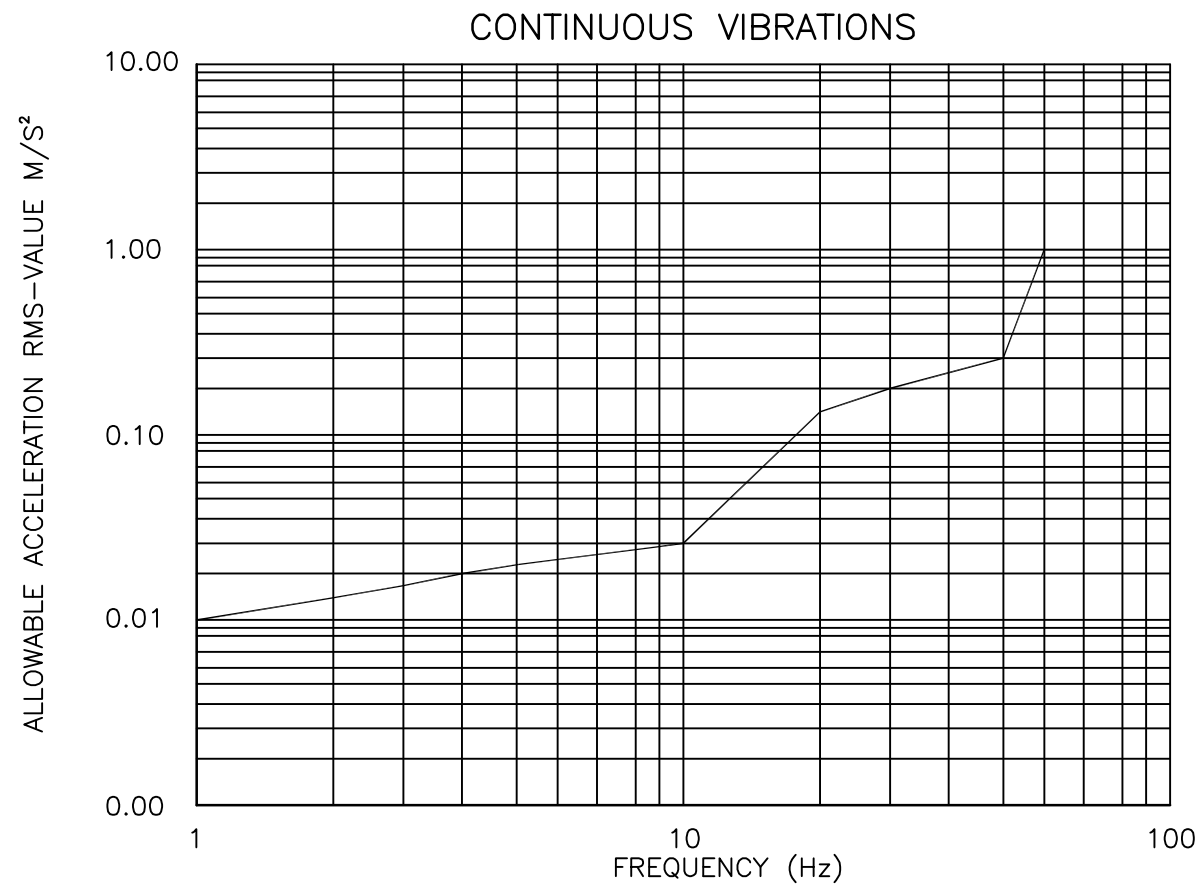




STRUCTURAL FLOOR PLAN

SCALE: 1/4" = 1'-0"

FLOOR AND BUILDING VIBRATIONS



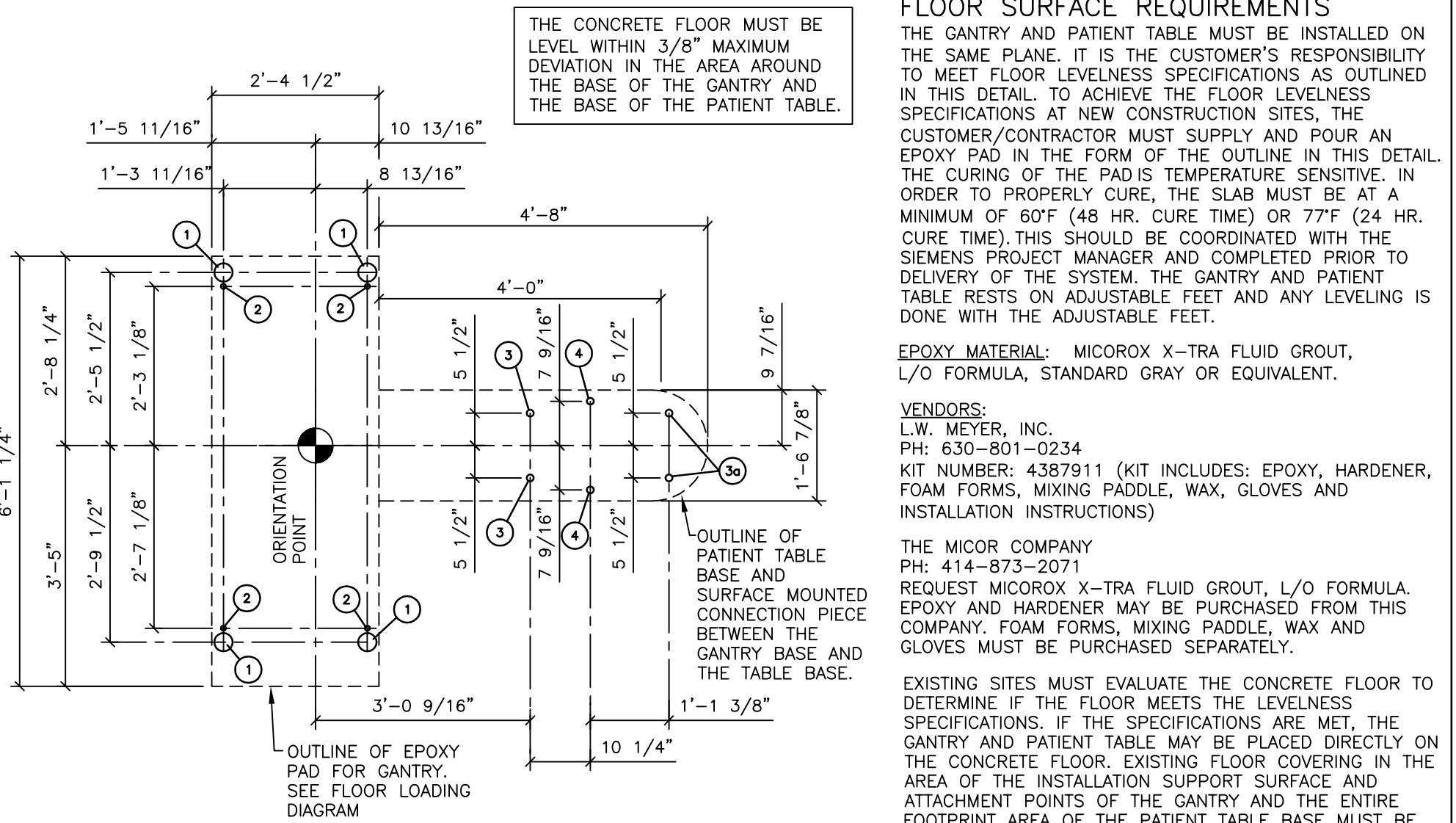
THRESHOLD VALUES OF ALLOWABLE ACCELERATION (RMS VALUE OF 1 Hz RESOLUTION FFT)

FREQUENCY (Hz)	ACCELERATION RMS (M/S <sup>2</sup> )
1	0.010
2	0.014
3	0.017
4	0.019
5	0.022
6	0.024
7	0.025
8	0.027
9	0.029
10	0.030
11	0.037
12	0.046
13	0.055
14	0.066

FREQUENCY (Hz)	ACCELERATION RMS (M/S <sup>2</sup> )
15	0.077
16	0.089
17	0.103
18	0.117
19	0.133
20	0.150
25	0.178
30	0.204
35	0.229
40	0.253
45	0.277
50	0.300
55	0.563
≥60	1.000

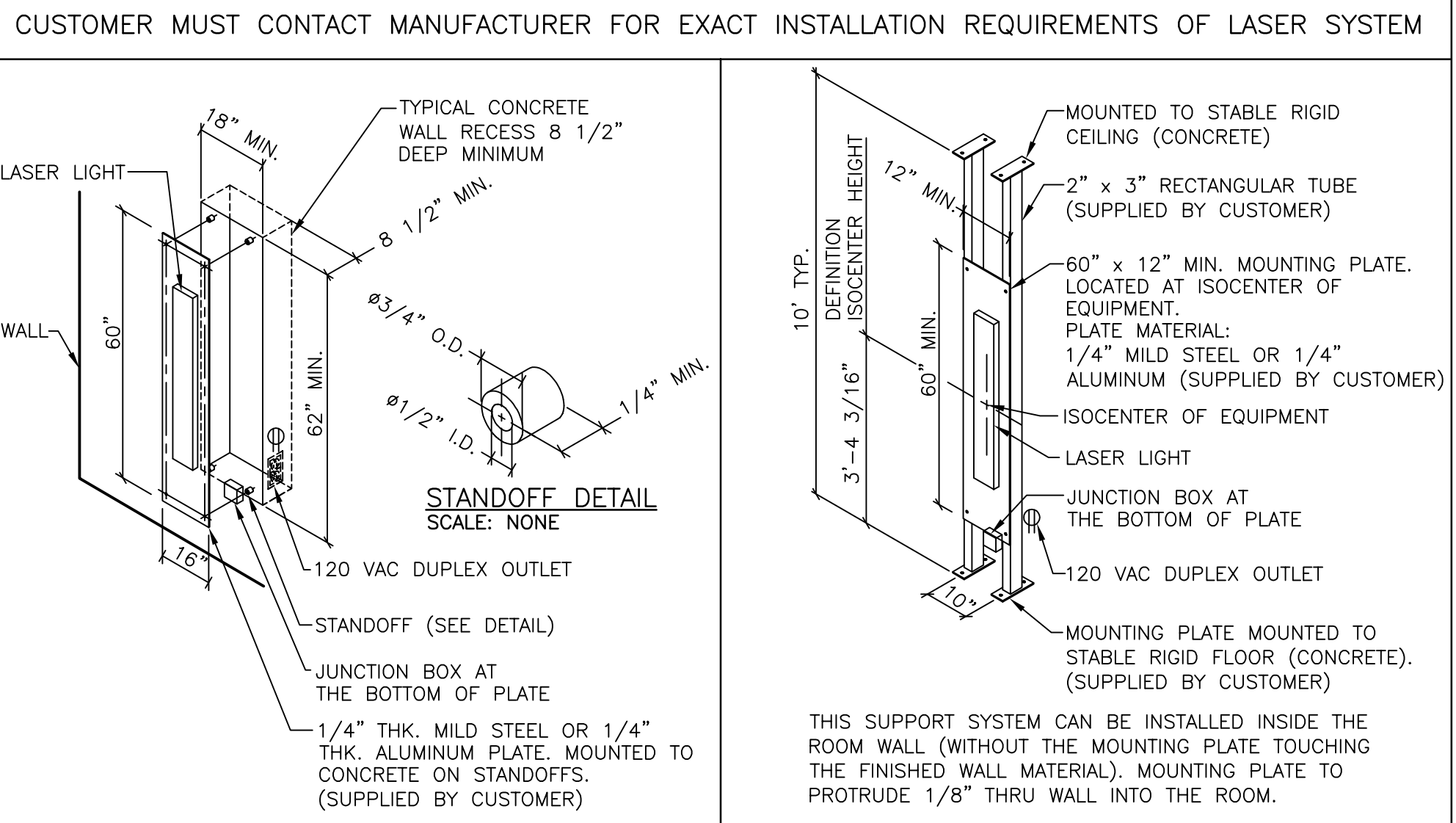
TRANSIENT VIBRATIONS (SHOCKS)  
ANY TRANSIENT VIBRATION HAS TO BE LESS THAN 0.5 M/S<sup>2</sup> PEAK-TO-PEAK IN THE TIME DOMAIN. THE VIBRATIONS HAVE TO BE MEASURED WITH A SAMPLING RATE OF 1000Hz.

THE CT SYSTEM IS NOT SENSITIVE TO COMMON VIBRATIONS. IF THE CT IS AWAY FROM VIBRATIONAL SOURCES OR THE CT IS REPLACING A CT SYSTEM, THAT TO DATE, HAS NOT SHOWN IMAGE QUALITY PROBLEMS DUE TO VIBRATIONS, IT IS USUALLY NOT NECESSARY TO EXECUTE VIBRATIONAL MEASUREMENTS. IF THERE ARE ANY DOUBTS, THE FOLLOWING THRESHOLDS HAVE TO BE VERIFIED BY MEASUREMENT:  
IN THE THREE SPACIAL DIRECTIONS, ACCELERATION IN VIBRATIONS AT THE MOUNTING POINTS OF THE GANTRY AND THE PATIENT TABLE MUST NOT EXCEED THE THRESHOLDS AS DESCRIBED HERE.  
THE THRESHOLD IS DEFINED AS ACCELERATION RMS VALUE (ROOT MEAN SQUARE) IN M/S<sup>2</sup> OF AN FFT SPECTRUM DERIVED WITH A FREQUENCY RESOLUTION OF 1 Hz AND USING A HANNING-WINDOW. THE VIBRATIONS HAVE TO BE MEASURED WITH A SAMPLING RATE OF 1000Hz USING AN ANTI-ALIASING-FILTER WITH A LIMIT FREQUENCY OF 250Hz. THE THRESHOLD IS VALID FOR VIBRATIONS AT THE INSTALLATION LOCATION WITH A CT IN POSITION.  
MEASUREMENTS MUST BE TAKEN PRIOR TO THE INSTALLATION OF THE CT, THEREFORE CHANGES IN THE EIGENFREQUENCY OF THE SLAB CAUSED BY THE ADDITIONAL MASS OF THE CT MUST BE CONSIDERED WHEN COMPARING THE FREQUENCY SPECTRUM WITH THE THRESHOLD. VALUES OF THE THRESHOLD ARE SHOWN BELOW.



GANTRY AND PATIENT TABLE MOUNTING DETAIL

SCALE: 1/2"=1'-0"



LAP SIDE LASER LIGHT MOUNTING DETAIL

SCALE: NONE

FINISHED ROOM HEIGHT

FOR CT GANTRY ONLY	MINIMUM 7'-6 9/16"
CAREVISION MONITOR/CEILING MOUNT	MIN. 8'-7 1/2" MAX. 11'-2 5/8"

FLOOR SURFACE REQUIREMENTS

THE GANTRY AND PATIENT TABLE MUST BE INSTALLED ON THE SAME PLANE. IT IS THE CUSTOMER'S RESPONSIBILITY TO MEET FLOOR LEVELNESS SPECIFICATIONS AS OUTLINED IN THIS DETAIL. TO ACHIEVE THE FLOOR LEVELNESS SPECIFICATIONS AT NEW CONSTRUCTION SITES, THE CUSTOMER/CONTRACTOR MUST SUPPLY AND POUR AN EPOXY PAD IN THE FORM OF THE OUTLINE IN THIS DETAIL. THE CURING OF THE PAD IS TEMPERATURE SENSITIVE. IN ORDER TO PROPERLY CURE, THE SLAB MUST BE AT A MINIMUM OF 60°F (48 HR. CURE TIME) OR 77°F (24 HR. CURE TIME). THIS SHOULD BE COORDINATED WITH THE SIEMENS PROJECT MANAGER AND COMPLETED PRIOR TO DELIVERY OF THE SYSTEM. THE GANTRY AND PATIENT TABLE RESTS ON ADJUSTABLE FEET AND ANY LEVELING IS DONE WITH THE ADJUSTABLE FEET.

EPOXY MATERIAL: MICOROX X-TRA FLUID GROUT, L/O FORMULA, STANDARD GRAY OR EQUIVALENT.

VENDORS:  
L.W. MEYER, INC.  
PH: 630-801-0234  
KIT NUMBER: 387911 (KIT INCLUDES: EPOXY, HARDENER, FOAM FORMS, MIXING PADDLE, WAX, GLOVES AND INSTALLATION INSTRUCTIONS)

THE MICOR COMPANY  
PH: 414-873-2071

REQUEST MICOROX X-TRA FLUID GROUT, L/O FORMULA. EPOXY AND HARDENER MAY BE PURCHASED FROM THIS COMPANY. FOAM FORMS, MIXING PADDLE, WAX AND GLOVES MUST BE PURCHASED SEPARATELY.

EXISTING SITES MUST EVALUATE THE CONCRETE FLOOR TO DETERMINE IF THE FLOOR MEETS THE LEVELNESS SPECIFICATIONS. IF THE SPECIFICATIONS ARE MET, THE GANTRY AND PATIENT TABLE MAY BE PLACED DIRECTLY ON THE CONCRETE FLOOR. EXISTING FLOOR COVERING IN THE AREA OF THE INSTALLATION SUPPORT SURFACE AND ATTACHMENT POINTS OF THE GANTRY AND THE ENTIRE FOOTPRINT AREA OF THE PATIENT TABLE BASE MUST BE REMOVED AND REPLACED WITH SHIMS OF THE APPROPRIATE THICKNESS. IF FLOOR LEVELNESS SPECIFICATIONS ARE NOT MET, THE CUSTOMER/CONTRACTOR MUST SUPPLY AND POUR AN EPOXY PAD AS STATED ABOVE.

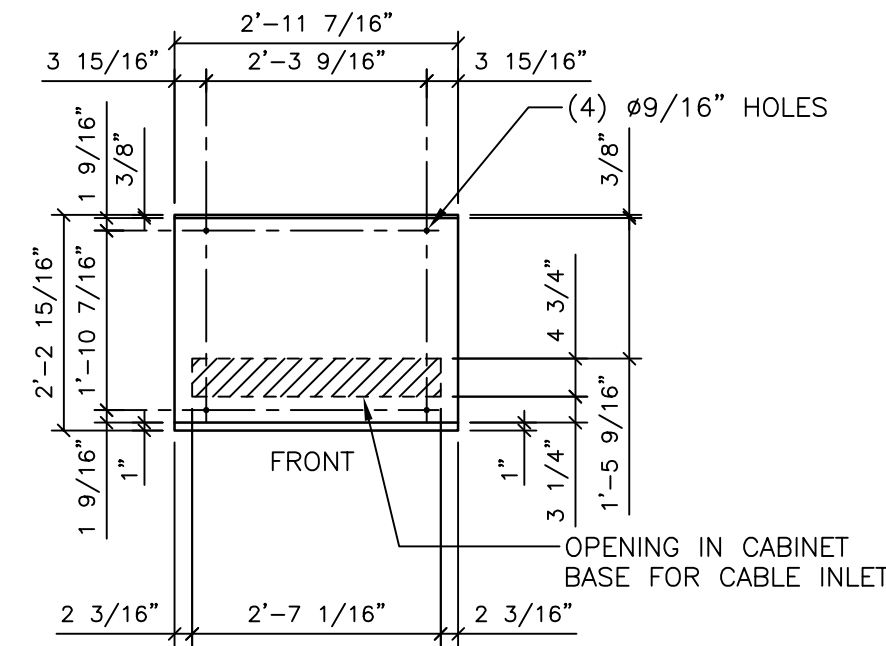
BOLTING REQUIREMENTS

THE WEIGHT CAPACITY OF THE FLOOR MUST BE EVALUATED BY A STRUCTURAL ENGINEER. BOLTING THE GANTRY TO THE FLOOR IS ONLY NECESSARY WHEN LOCAL OR NATIONAL REGULATIONS REQUIRE IT (EXAMPLE: EARTHQUAKE ZONES). BOLT THE GANTRY TO THE FLOOR USING ANCHORS THROUGH THE MOUNTING HOLES IN THE GANTRY BASE. MATERIALS FOR BOLTING MUST BE SUPPLIED ON-SITE.

THE PATIENT TABLE MUST ALWAYS BE BOLTED TO THE FLOOR THROUGH THE ATTACHMENT POINTS IN THE TABLE PEDESTAL. A DRILLING TEMPLATE AND ALL INSTALLATION MATERIALS ARE INCLUDED IN THE DELIVERY. ANCHOR: HILTI HSL-3G M10/60 (USED WITHOUT COMPOSITE FLOORING) OR HSL-3G M10/120 (USED WITH MAX. 2 3/8" COMPOSITE FLOORING) ARE SUPPLIED WITH THE TABLE. THE CONCRETE MUST BE MIN. 5 1/2" THICK.

IT IS THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER TO DETERMINE THE ANCHORING DEPTH AND CONCRETE STRENGTH NEEDED TO INSTALL THE TABLE BASE WITH THE SIEMENS SUPPLIED ANCHORS OR EQUIVALENT ANCHORS SPECIFIED BY THE STRUCTURAL ENGINEER AND SUPPLIED BY THE CUSTOMER/CONTRACTOR.

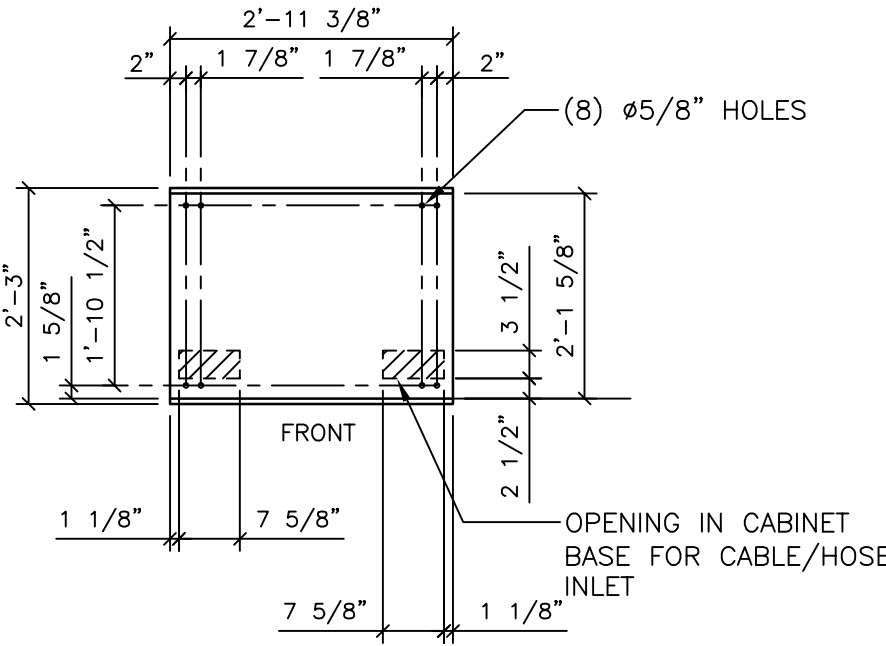
POWER DISTRIBUTION CABINET



PDC CABINET BASE

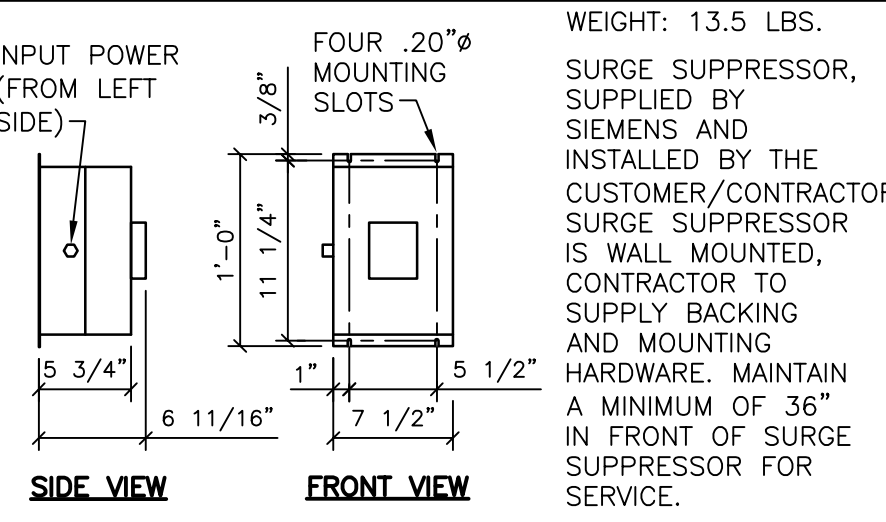
SCALE: 1/2"=1'-0"

HEAT EXCHANGER CABINET (WATER/AIR SPLIT COOLING SYSTEM)



HE CABINET BASE

SCALE: 1/2"=1'-0"



SURGE SUPPRESSOR

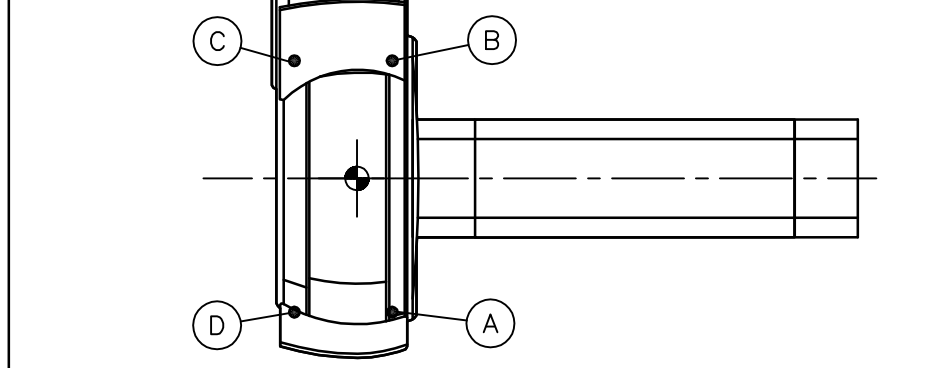
SCALE: NONE

STRUCTURAL NOTES

- 1) THE CUSTOMER/CONTRACTOR SHALL FURNISH AND INSTALL ALL STRUCTURAL SUPPORT MEMBERS AND NEEDED HARDWARE FOR THE INSTALLATION OF THE SIEMENS EQUIPMENT.
- 2) THE OVERHEAD STRUCTURAL SUPPORT SYSTEM SHALL BE FIXED, RIGID AND BRACED FOR SWAY.
- 3) ALL STRUCTURAL SUPPORT MEMBERS SHALL BE TRUE, SQUARE, LEVEL, PARALLEL AND COPLANAR WITH RESPECT TO EACH OTHER, WITH A HORIZONTAL STRUCTURAL SUPPORT MEMBER TO BE LOCATED AND SET WITH A TRANSIT.
- 4) ALL STRUCTURAL SUPPORT DETAILS SHOWN ARE SAMPLE DETAILS BASED UPON TYPICAL AND STANDARD BUILDING PRACTICES AND ARE NOT INTENDED AS ACTUAL CONSTRUCTION DETAILS. ALL CONSTRUCTION DETAILS AND SUPPORT CALCULATIONS SHALL BE PREPARED BY A PROFESSIONAL STRUCTURAL ENGINEER AT THE CUSTOMER'S EXPENSE. IN THE EVENT AN EXISTING SUPPORT SYSTEM IS TO BE USED, IT WILL BE THE CUSTOMER'S RESPONSIBILITY TO VERIFY THE INTEGRITY OF THAT SYSTEM.
- 5) WHERE SHOWN ON THE 1/4" STRUCTURAL FLOOR PLAN, THERE ARE ON OCCASION MOUNTING FRAMES FURNISHED BY SMS. THESE FRAMES ARE TO BE SET BY THE CONTRACTOR, UNDER THE SUPERVISION OF SMS PERSONNEL. THE CUSTOMER/CONTRACTOR IS RESPONSIBLE FOR ALL FRAMES INSTALLED BY HIM TO BE WATER LEVEL AND ANCHORED PROPERLY.
- 6) ALL CEILING FIXTURES (i.e. AIR SUPPLY GRILLES, AIR RETURN GRILLES, EXHAUST GRILLES, SPRINKLER HEADS, INCANDESCENT AND FLUORESCENT LIGHT FIXTURES, INTERCOM SPEAKERS, MEDICAL GAS COLUMNS, ETC.) SHALL BE INSTALLED FLUSH MOUNTED WITH THE FINISHED CEILING TO PROVIDE FREE AND UNRESTRICTED TRAVEL OF THE SMS CEILING MOUNTED EQUIPMENT.
- 7) THE BOTTOM SIDE OF THE UNISTRUT CEILING GRID AND ANY CEILING MOUNTED SUPPORT PLATES ARE TO BE INSTALLED FLUSH WITH THE FINISHED CEILING. THE CUSTOMER/CONTRACTOR SHALL ALSO PROVIDE COVERSTRIPS FOR THE UNISTRUT.
- 8) THE STRUCTURAL PLANNING AS SHOWN ON THE 1/4" STRUCTURAL FLOOR PLAN HAS BEEN COORDINATED WITH THE EQUIPMENT LOCATION AS SHOWN ON THE 1/4" EQUIPMENT LAYOUT PLAN. FOR THIS REASON, ANY DEVIATIONS FROM THE STRUCTURAL PLANNING AS SHOWN MUST BE APPROVED BY SMS PLANNING DEPARTMENT.
- 9) THE STRUCTURAL ENGINEER OF RECORD SHALL BE RESPONSIBLE FOR THE DESIGN AND DETAIL OF FLOOR, WALL AND CEILING STRUCTURES IN ACCORDANCE WITH THE WEIGHTS, MOMENTS AND FORCES AS SHOWN ON OUR STRUCTURAL CALCULATIONS, OR INFORMATION, IN CONSIDERATION OF FORCES AS DETERMINED PER LOCAL GOVERNING BUILDING CODES.

FLOOR LOADING

DESCRIPTION			
F STAT MAX	STATIC FLOOR LOADING DUE TO GANTRY'S OWN WEIGHT		
AMPLITUDE	DIFFERENCE BETWEEN MINIMUM AND MAXIMUM FLOOR LOADING DURING GANTRY ROTATION		
MEASUREMENT POINTS			
ADJUSTABLE FOOT	F STAT MAX (POUNDS)	AMPLITUDE FOR F DYN (POUNDS)	BEARING AREA PER ADJUSTABLE FOOT
(A)	1034	±135	7 3/4 IN <sup>2</sup>
(B)	1540	±112	
(C)	1248	±112	
(D)	1034	±135	



- NOTE:
- 1) THE VALUES PROVIDED FOR FLOOR LOADING APPLY ONLY IF THE GANTRY IS SATISFACTORILY LEVELED.
  - 2) THE FLOOR STRUCTURE MUST BE CAPABLE OF WITHSTANDING THE OCCUPIED WEIGHT OF THE GANTRY AND THE INDIVIDUAL CONTACT AREA LOADING.

ATTENTION:

— THIS DRAWING IS DESIGNED TO CONFORM TO FEATURES AND EQUIPMENT REQUIREMENTS PRESENTED AT THE TIME OF THEIR PREPARATION. SINCE BOTH THESE FACTORS ARE SUBJECT TO DESIGN MODIFICATION, THEY ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES.  
— THIS SET OF PLANS REPRESENTS A COMPLETE SET OF DETAILS AND SHOULD NOT BE SEPARATED.

— IT IS RECOMMENDED THAT THE SIEMENS DRAWINGS BE INCORPORATED WITH THE CONSTRUCTION DOCUMENTS FOR REFERENCE.

— ALL DIMENSIONS SHOWN ON THIS DRAWING ARE FROM FINISHED SURFACES.  
— THIS DRAWING DOES NOT PROVIDE RADIATION SHIELDING REQUIREMENTS FOR X-RAY AND ASSOCIATED EQUIPMENT. THE CUSTOMER IS RESPONSIBLE FOR CONSULTING WITH A REGISTERED RADIATION PHYSICIST TO SPECIFY RADIATION PROTECTION.

△

SYM

DATE

DESCRIPTION

—ISSUE BLOCK—

SIEMENS

SOMATOM DEFINITION AS 20/40/64/128

TYPICAL DRAWING

PROJECT #:

08006

SHEET 3 OF 8

DRAWN BY: L. BROBJORG

DATE: 06/09/11

CHECKED:

SHEET:

S-101

THE USE OR REPRODUCTION OF THIS TITLE BLOCK WITHOUT SIEMENS' AUTHORIZATION WILL RESULT IN PROSECUTION UNDER FULL EXTENT OF THE LAW.

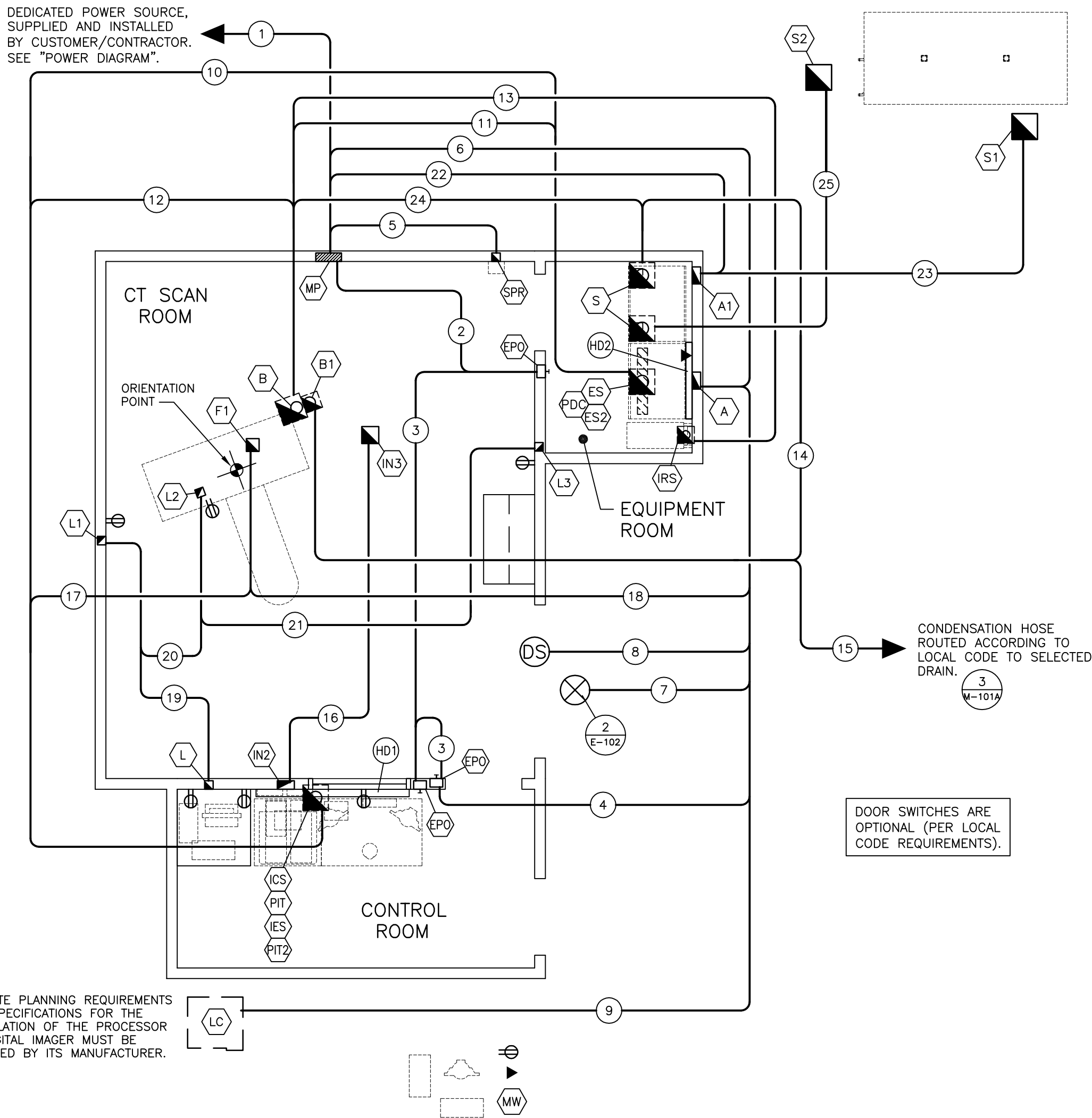
ALL RIGHTS ARE RESERVED.

SCALE: AS NOTED

REF. #:







ELECTRICAL RACEWAY PLAN

SCALE: 1/4" = 1'-0"

SYMBOLS	
ALL MAY NOT APPLY	
	CAUTION OR WARNING
	MAIN PANEL OR ENCLOSURE BY CUSTOMER/CONTRACTOR
	OPENING IN RACEWAY OR TRENCHDUCT
	PULLBOX IN (FLOOR/WALL/CEILING)
	OPENING IN ACCESS FLOORING
	WARNING LIGHT (X-RAY ON)
	DOOR SAFETY SWITCH
	(EPO) EMERGENCY POWER OFF BUTTON
	TRENCHDUCT
	CEILING DUCT
	UNDER FLOOR DUCT
	VERTICAL DUCT
	ETHERNET CONNECTION TO CUSTOMER'S INFORMATION SYSTEMS NETWORK (VERIFY WITH SMS PROGRAM MANAGER).
	110 VOLT, 20 AMP, HOSPITAL GRADE DUPLEX OUTLET UNLESS OTHERWISE STATED.

CONDUIT LENGTH CALCULATIONS

IF SITE SPECIFIC CONDITIONS EXCEED THE FOLLOWING ASSUMED VALUES THEN ADDITIONAL LENGTH MUST BE SUBTRACTED BY THE ELECTRICAL CONTRACTOR FROM THE MAXIMUM CONDUIT LENGTHS LISTED.

IF DUCT LOCATIONS ARE ALTERED FROM THE SHOWN LAYOUT IT IS THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO RECALCULATE THE MAXIMUM CONDUIT LENGTHS.

ASSUMED VALUES USED IN CALCULATING STATED MAXIMUM CONDUIT LENGTHS:

VERTICAL DUCTS - 10'-0"

FLOOR PENETRATIONS - 3'-0"

ELECTRICAL LEGEND

SYM	SIZE	DESCRIPTION	REMARKS
A	AS REQUIRED	PULL BOX MOUNTED FLUSH WITH FINISHED WALL AT FLOORLINE IN SHOWN LOCATION.	ANCILLARY WIRING
A1	AS REQUIRED	PULL BOX MOUNTED FLUSH WITH FINISHED WALL AT FLOORLINE IN SHOWN LOCATION.	
B	AS REQUIRED	PULL BOX MOUNTED BELOW FLOOR SLAB WITH A 5 1/2" COREDRILL WITH SLEEVE THROUGH THE SLAB ENDING FLUSH WITH THE FINISHED FLOOR IN SHOWN LOCATIONS.	GANTRY CABLE ACCESS
B1	AS REQUIRED	PULL BOX MOUNTED BELOW FLOOR SLAB WITH A 5 1/2" COREDRILL WITH SLEEVE THROUGH THE SLAB ENDING FLUSH WITH THE FINISHED FLOOR IN SHOWN LOCATION.	GANTRY CABLE ACCESS
EP	----	EMERGENCY POWER OFF BUTTON THAT PREVENTS RESETTING OF CIRCUIT BREAKER WHEN IN THE OFF POSITION WITH PROTECTIVE COVER, MOUNTED ON WALL AT 5'-0" ABOVE FINISHED FLOOR. THERE SHALL BE AN EPO IN EACH ROOM OF THE SUITE WHERE SIEMENS EQUIPMENT IS LOCATED. EXACT LOCATIONS TO BE DETERMINED BY CUSTOMER/CONTRACTOR.	SEE POWER DIAGRAM
ES	----	ETHERNET SWITCH FOR ICS, IRS, GANTRY & PDC SUPPLIED BY SIEMENS. LOCATED INSIDE PDC CABINET.	
ES1	----	ETHERNET SWITCH FOR REMOTE IES, DICOM CAMERAS & NETWORK PRINTER SUPPLIED BY SIEMENS. LOCATED INSIDE PDC CABINET.	
F1	AS REQUIRED	PULL BOX MOUNTED ABOVE FINISHED CEILING.	CARE VISION MONITOR CEILING MOUNT
ES/EP	AS REQUIRED	PULL BOX MOUNTED BELOW FLOOR SLAB WITH 6" COREDRILL WITH SLEEVE THROUGH SLAB ENDING FLUSH WITH FINISHED FLOOR IN SHOWN LOCATION.	IMAGE CONSTRUCTION SYS.
ES/EP	----	FIXTURE DESIGNATION, SAME PULL BOX/OPENING AS ICS/PIT.	IMAGE EVALUATION SYSTEM
IN	AS REQUIRED	PULL BOX MOUNTED FLUSH WITH FINISHED WALL IN CONTROL AREA.	INJECTOR ELECTRONICS
IN	AS REQUIRED	PULL BOX MOUNTED ABOVE FINISHED CEILING IN SHOWN LOCATION.	CEILING MTD. INJECTOR
IN	AS REQUIRED	PULL BOX MOUNTED TO UNDERSIDE OF FLOOR SLAB WITH 4" COREDRILL WITH SLEEVE THROUGH FLOOR SLAB ENDING FLUSH WITH FINISHED FLOOR IN SHOWN LOCATION.	IMAGE RECONSTRUCTION CAB.
L	AS REQUIRED	PULL BOX MOUNTED FLUSH WITH FINISHED WALL IN CONTROL AREA. THERE SHOULD ALSO BE AN OUTLET LOCATED NEAR THE PULL BOX TO SUPPLY 110/220 VAC.	LASER LOCALIZER LIGHT PC/CONTROLLER
L1/L3	AS REQUIRED	PULL BOX MOUNTED FLUSH WITH FINISHED WALL. (LAP LASERS)	SEE DETAIL S-101
L2	AS REQUIRED	PULL BOX MOUNTED ABOVE FINISHED CEILING. (LAP LASERS)	SEE DETAIL S-102
L3	----	LOCATION OF CUSTOMER'S DICOM LASER CAMERA	
MP	3-PHASE	MAIN PANEL - FOR UNITS WITH MULTIPLE CIRCUIT BREAKERS. EXACT LOCATION DETERMINED BY CUSTOMER/CONTRACTOR.	REFER TO POWER DIAGRAM FOR INDIVIDUAL CIRCUIT BREAKERS
MP	----	ETHERNET CONNECTION TO HOSPITAL NETWORK, EXACT LOCATION TO BE COORDINATED WITH SIEMENS PROJECT MANAGER.	LEONARDO WORKSTATION
IN	AS REQUIRED	PULL BOX MOUNTED TO UNDERSIDE OF FLOOR SLAB WITH 6" COREDRILL WITH SLEEVE THROUGH FLOOR SLAB ENDING FLUSH WITH FINISHED FLOOR IN SHOWN LOCATION.	POWER DISTRIBUTION CAB.
S	AS REQUIRED	TWO PULL BOXES MOUNTED BELOW THE FLOOR SLAB WITH TWO 6" COREDRILLS WITH SLEEVES THROUGH THE FLOOR SLAB ENDING FLUSH WITH FINISHED FLOOR IN SHOWN LOCATIONS.	HEAT EXCHANGER CABINET-WATER/AIR SPLIT
SI	AS REQUIRED	PULL BOX THAT IS PROVIDED ON THE OUTDOOR COOLING UNIT.	OUTDOOR COOLING UNIT-WATER/AIR SPLIT
SI	AS REQUIRED	PULL BOX MOUNTED ADJACENT TO OUTDOOR COOLING UNIT PROVIDED WITH FLEX-TITE CONDUIT FROM PULL BOX TO WATER HOSE CONNECTIONS ON OUTDOOR COOLING UNIT.	OUTDOOR COOLING UNIT-WATER/AIR SPLIT
EP	AS REQUIRED	PULL BOX MOUNTED FLUSH WITH FINISHED WALL PROVIDED WITH 2" OPENING IN FINISHED COVER. THE SURGE SUPPRESSOR MUST BE LOCATED WITHIN 3 FEET CABLE RUN FROM CIRCUIT BREAKER, AT HEIGHT DETERMINED BY CUSTOMER/ CONTRACTOR.	SEE DETAIL S-101
IN/EP	10" x 3 1/2"	ELECTRICAL DUCT RUN HORIZONTALLY ON THE WALL AT THE FLOORLINE AND SURFACE MOUNTED ON FINISHED WALL AS SHOWN FOR EXCESS CABLE STORAGE.	RACEWAY
1	AS REQUIRED	CONDUIT FROM POWER SOURCE TO "MP" SIZED BY ELECTRICAL CONTRACTOR.	SEE POWER DIAGRAM
2	AS REQUIRED	CONDUIT FROM "MP/ME" TO "EPO" SIZED BY ELECTRICAL CONTRACTOR.	SEE POWER DIAGRAM
3	AS REQUIRED	CONDUIT FROM "EPO" TO "EPO" SIZED BY ELECTRICAL CONTRACTOR.	SEE POWER DIAGRAM
4	AS REQUIRED	CONDUIT FROM "EPO" TO "A" (PDC/UPS), SIZED BY ELECTRICAL CONTRACTOR.	SEE POWER DIAGRAM
5	AS REQUIRED	CONDUIT FROM "MP" TO "SPR" SIZED BY ELECTRICAL CONTRACTOR.	SEE POWER DIAGRAM
6	AS REQUIRED	CONDUIT FROM "MP" TO "A" (PDC), SIZED BY ELECTRICAL CONTRACTOR.	SEE POWER DIAGRAM
7	AS REQUIRED	CONDUIT FROM "A" (PDC) TO "WARNING LIGHT".	
8	AS REQUIRED	CONDUIT FROM "A" (PDC) TO "DS".	
9	AS REQUIRED	CONDUIT FROM "A" (PDC) TO "LC".	
10	2-1/2"	CONDUIT FROM "PDC" TO "ICS/PIT".	MAX. CONDUIT LENGTH 76'-0"
11	(3) 3"	CONDUITS FROM "PDC" TO "B" WITH A MINIMUM 6" BENDING RADIUS.	MAX. CONDUIT LENGTH 76'-0"
12	3"	CONDUIT FROM "B" TO "ICS/PIT".	MAX. CONDUIT LENGTH 76'-0"
13	1-1/2"	CONDUIT FROM "B" TO "IRS".	MAX. CONDUIT LENGTH 76'-0"
14	(2) 3"	CONDUITS FROM "S" TO "B1". TO CONTAIN SIEMENS COOLING WATER HOSES WITH A MINIMUM 6" BENDING RADIUS.	MAX. CONDUIT LENGTH 90'-0" SEE SHEET M-101
15	1"	CONDUIT, IF REQUIRED PER LOCAL CODE, FOR CONDENSATION HOSE FROM "B1" TO SELECTED DRAIN TYPE. THE MINIMUM BENDING RADIUS IS 1 3/16".	MAX. CONDUIT LENGTH 32'-9"
16	2-1/2"	CONDUIT FROM "IN2" TO "IN3", VERIFY LENGTH RESTRICTIONS WITH MANUFACTURER.	
17	2-1/2"	CONDUIT FROM "ICS" TO "F1".	MAX. CONDUIT LENGTH 82'-0"
18	2-1/2"	CONDUIT FROM "A" (PDC) TO "F1".	MAX. CONDUIT LENGTH 68'-0"
19	1"	CONDUIT FROM "L" TO "L1".	MAX. CONDUIT LENGTH 50'-0"
20	1"	CONDUIT FROM "L1" TO "L2".	MAX. CONDUIT LENGTH 50'-0"
21	1"	CONDUIT FROM "L2" TO "L3".	MAX. CONDUIT LENGTH 50'-0"
22	AS REQUIRED	CONDUIT FROM "MP" TO "A1" (S), SIZED BY ELECTRICAL CONTRACTOR.	SEE POWER DIAGRAM
23	1-1/2"	CONDUIT FROM "A1" (S) TO "S1".	MAX. CONDUIT LENGTH 131'-0"
24	1-1/2"	CONDUIT FROM "S" TO "B".	MAX. CONDUIT LENGTH 92'-0"
25	(2) 3"	CONDUITS, IF REQUIRED PER LOCAL CODE, FROM "S" TO "S2". THE MINIMUM BENDING RADIUS IS 12.5".	MAX. CONDUIT LENGTH 119'-0" SEE SHEET M-101

ELECTRICAL NOTES

- 1) COMPLIANCE: ELECTRICAL WORK SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA-70), O.S.H.A. REGULATIONS, AS WELL AS APPLICABLE REGULATIONS OF CITY, COUNTY, STATE AND FEDERAL AGENCIES. PROVIDE MATERIALS AND EQUIPMENT THAT COMPLY TO ANSI, IEEE AND NEMA STANDARDS. WHERE APPLICABLE, PROVIDE ONLY MATERIALS AND PRODUCTS THAT ARE U.L. LISTED AND LABELED. CUSTOMER'S/CONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF NECA STANDARD OF INSTALLATION.
- 2) QUALITY ASSURANCE: THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN THE FIELD TO INSURE THAT THE NEW WORK WILL FIT TO THE EXISTING STRUCTURE AS SHOWN ON THE DRAWINGS. SHOULD ANY CONDITIONS EXIST OR BE DISCOVERED THAT PREVENT THE INSTALLATION OF WORK AS SHOWN, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE PRIOR TO FABRICATION OF EQUIPMENT, OR THE PERFORMANCE OF ANY WORK THAT MAY BE AFFECTED. DO NOT ALTER DRAWINGS, DIMENSIONS, OR SPECIFICATIONS IN ANY WAY WITHOUT CONTACTING AND RECEIVING WRITTEN CONFIRMATION FROM SMS PROGRAM MANAGER. ALL DIMENSIONS ARE FROM FINISHED SURFACES. CONDUIT AND PULL BOXES TO BE INSTALLED BY THE CUSTOMER/CONTRACTOR WITH LOCATIONS BEING FIELD VERIFIED BY SMS PROJECT MANAGER.
- 3) POWER SUPPLY SOURCE: POWER SUPPLIES FOR SIEMENS MEDICAL SOLUTIONS EQUIPMENT SHALL BE DEDICATED SERVICES KEPT ENTIRELY FREE AND INDEPENDENT OF ALL OTHER BUILDING WIRING AND EQUIPMENT, SUCH AS: ELEVATORS, GENERATORS, PUMPS, HVAC SYSTEMS, ETC. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH THE CUSTOMER/UTILITY COMPANY FIELD REPRESENTATIVE.
- 4) WORK FURNISHED BY CUSTOMER/CONTRACTOR: WORK NOT PROVIDED BY SIEMENS MEDICAL SOLUTIONS BUT SHOWN ON DRAWINGS TO BE FURNISHED AND INSTALLED BY CUSTOMER/CONTRACTOR INCLUDES THE FOLLOWING BUT IS NOT LIMITED TO UNLESS NOTED OTHERWISE: ELECTRICAL RACEWAYS AND DUCTS, WIRING TROUGHS, PULL BOXES, CONDUITS, CIRCUIT BREAKERS, EMERGENCY OFF BUTTONS, DOOR SWITCHES, WARNING LIGHTS, WIRING, WIRING DEVICES, CONNECTORS, LIGHTING EQUIPMENT AND GROUNDING.
- 5) RACEWAY AND CONDUIT NOTES: RACEWAY SHALL BE ELECTRIC METALLIC TUBING (EMT) FOR RIGID CONDUIT WORK, OR WHERE SHORT OFF-SET CONNECTIONS ARE REQUIRED LIQUIDTIGHT FLEXIBLE METAL CONDUIT SHALL BE USED. FIELD BENDS SHALL NOT BE LESS THAN AS SHOWN IN TABLE 346-10 OF THE NATIONAL ELECTRICAL CODE. PROVIDE A JETLINE "SUPER TRUE TAPE", OR EQUIVALENT CONDUIT MEASURING TAPE FISH LINE IN ALL RACEWAYS AND CONDUITS. CONDUIT BODIES SHALL NOT BE USED. WHERE A CONDUIT ENTERS A BOX, FITTING, OR OTHER ENCLOSURE, AN INSULATED THROAT CONNECTOR SHALL BE PROVIDED TO PROTECT THE WIRE FROM ABRASION. CONNECTORS SHALL BE DOUBLE SET SCREW TYPE, STEEL CONCRETE TIGHT. KEEP RACEWAYS AT LEAST 6 INCHES AWAY FROM PARALLEL RUNS OF FLUES OR STEAM AND HOT WATER PIPES. INSTALL RACEWAY RUNS ABOVE WATER AND STEAM PIPES PROVIDED THAT CABLE RUN DISTANCES ARE MAINTAINED. USE TEMPORARY CLOSURES TO PREVENT FOREIGN MATTER FROM ENTERING RACEWAY. CONDUIT RUNS ARE SHOWN SCHEMATICALLY. INSTALL CONDUIT WITH A MINIMUM OF BENDS IN THE SHORTEST PRACTICAL DISTANCE CONSIDERING THE BUILDING CONSTRUCTION AND OBSTRUCTIONS EXCEPT AS OTHERWISE INDICATED. THE CONTRACTOR SHALL MAKE CERTAIN THAT ANY CONDUIT/RACEWAY RUNS CONTAINING SIEMENS MEDICAL SYSTEMS CABLES DO NOT EXCEED THE SPECIFIED MAXIMUM DISTANCES AS SHOWN ON THE ELECTRICAL DETAILS. PROVIDE ENCLOSED METAL RACEWAY SYSTEM (WIRE DUCT) WHERE SHOWN ON DRAWINGS WITH DIVIDERS TO SEPARATE THE DUCT (FOR POWER AND SIEMENS MEDICAL SOLUTIONS CABLING). DIVIDERS AND CROSSEOVER PIECES TO BE PROVIDED AS NECESSARY. FOR UL CERTIFIED SYSTEMS, THE CABLE TO CABLE AS WELL AS THE CIRCUIT TO CIRCUIT SEPARATION REQUIREMENT WAS EVALUATED DURING THE UL SYSTEM INVESTIGATION OF THIS EQUIPMENT. ADDITIONAL SEPARATION OF THE SYSTEM CABLE ASSEMBLIES INTO SEPARATE OR PARTITIONED RACEWAYS, UNLESS OTHERWISE NOTED, IS NOT NECESSARY TO INSURE SEPARATION OF CIRCUITS, AS THEY CAN BE IN THE SAME RACEWAY. PROVIDE WIRE DUCT/RACEWAY WITH ACCESSIBLE REMOVABLE COVERS. LOCATIONS OF OPENINGS TO BE CUT IN FIELD ARE TO BE COORDINATED WITH SIEMENS PROJECT MANAGER. ELECTRICAL PULL BOXES AND RACEWAY COVERS SHALL BE INSTALLED IN A MANNER TO ALLOW ACCESSIBILITY FOR INSTALLATION AND MAINTENANCE. IN-FLOOR TRENCH DUCT AND FLUSH FLOOR BOXES SHALL BE PROVIDED WITH FULLY GASKETED REMOVABLE COVERS.
- 6) WIRING: WIRING SHALL BE INSTALLED IN METAL RACEWAY, 600 VOLT CLASS, STRANDED TYPE THHN-THWN, SINGLE CONDUCTOR ANNEALED COPPER FOR A MAXIMUM OPERATING TEMPERATURE OF 75° C (165° F). SIZED AS INDICATED. THE CUSTOMER/CONTRACTOR SHALL LEAVE MINIMUM 10 FT. WIRE TAILS AT ALL OUTLET POINTS WITH WIRE IDENTIFICATION TAGGED AT BOTH ENDS FOR FINAL CONNECTION BY SIEMENS MEDICAL SOLUTIONS.
- 7) IN ADDITION TO THE CIRCUIT BREAKER LOAD CURRENT RATING, CONSIDERATION MUST ALSO BE GIVEN TO SELECTING CIRCUIT BREAKERS THAT HAVE A HIGH ENOUGH SHORT CIRCUIT CURRENT WITHSTAND RATING TO SAFELY COORDINATE WITH THE POWER SYSTEM AVAILABLE SHORT CIRCUIT CURRENT. GENERALLY, WHEN THE 480 VOLT, 3 PHASE, X-RAY EQUIPMENT IS SERVED FROM A POWER SUPPLY SYSTEM THAT IS PROVIDED WITH A 500 KVA OR SMALLER TRANSFORMER, A STANDARD 14,000 RMS AMPERE WITHSTAND RATED CIRCUIT BREAKER WILL BE ADEQUATE. HOWEVER, IF THE POWER SUPPLY SYSTEM TRANSFORMER IS LARGER THAN 500 KVA, THEN THE CIRCUIT BREAKERS HAVING A SHORT CIRCUIT WITHSTAND RATING GREATER THAN 14,000 RMS AMPERES MAY BE REQUIRED.

POWER QUALITY

POOR POWER WILL ALTER EQUIPMENT PERFORMANCE

IT IS IN THE CUSTOMER'S INTEREST THAT THE ELECTRICAL CONTRACTOR BE RESPONSIBLE FOR TESTING AND VERIFYING THAT THE EQUIPMENT POWER SUPPLY COMPLIES WITH THE SIEMENS SPECIFICATIONS.

FINISHED ROOM HEIGHT

FOR CT GANTRY ONLY	MINIMUM 7'-6 9/16"
CAREVISION MONITOR/CEILING MOUNT	MIN. 8'-7 1/2" MAX. 11'-2 5/8"

SIEMENS SOMATOM DEFINITION AS 20/40/64/128

TYPICAL DRAWING

PROJECT #:

08006

SHEET 5 OF 8

DRAWN BY: L. BROBJORG

DATE: 06/09/11

CHECKED:

SHEET:

E-101

ATTENTION:

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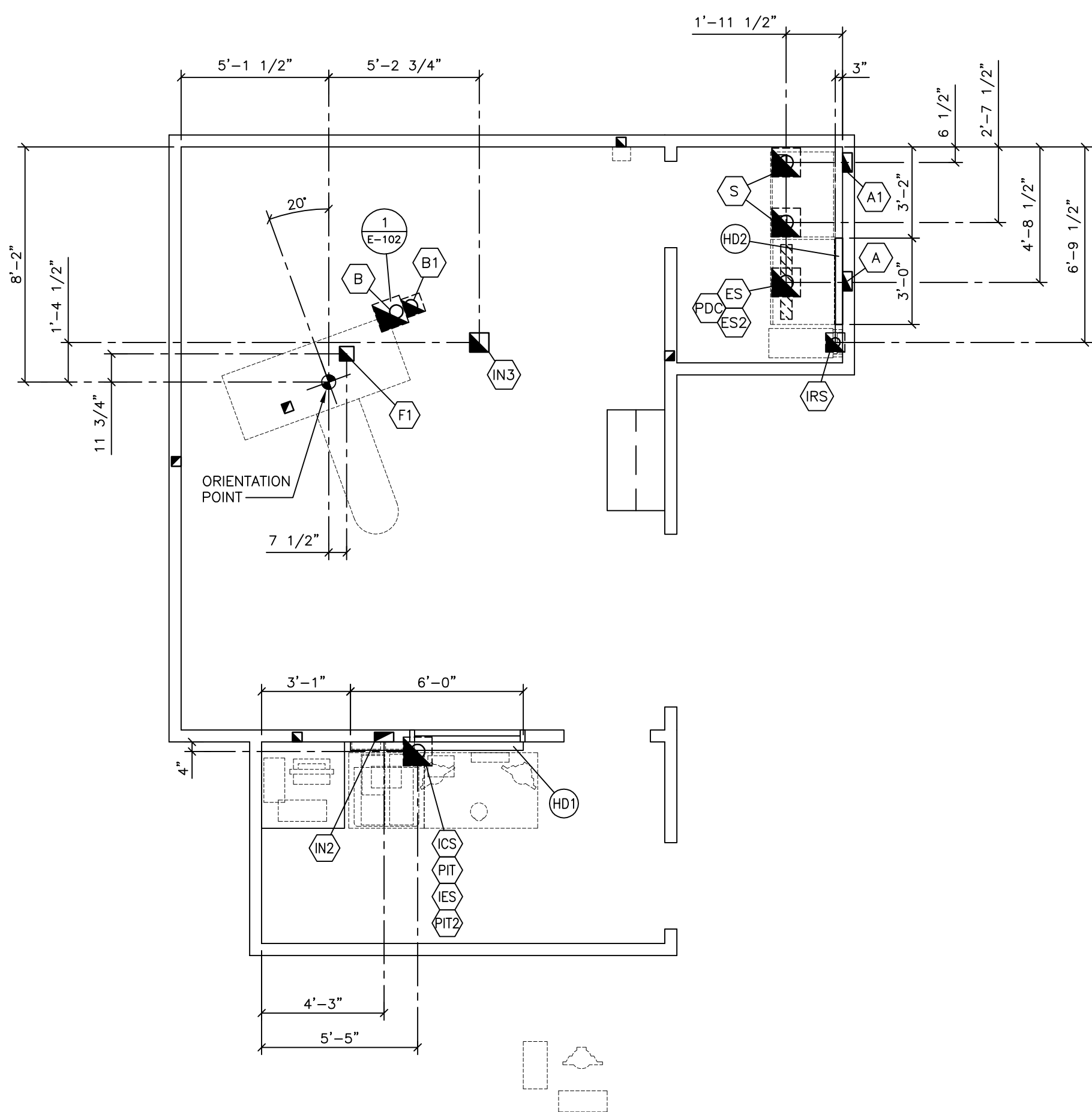
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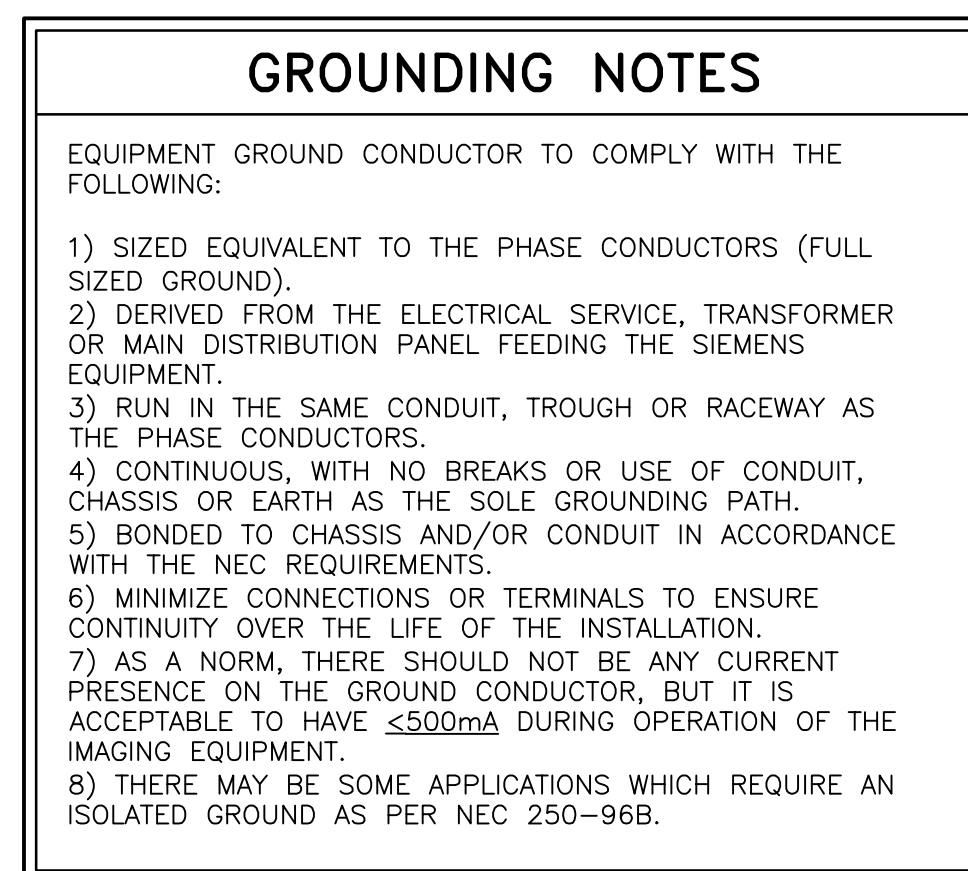
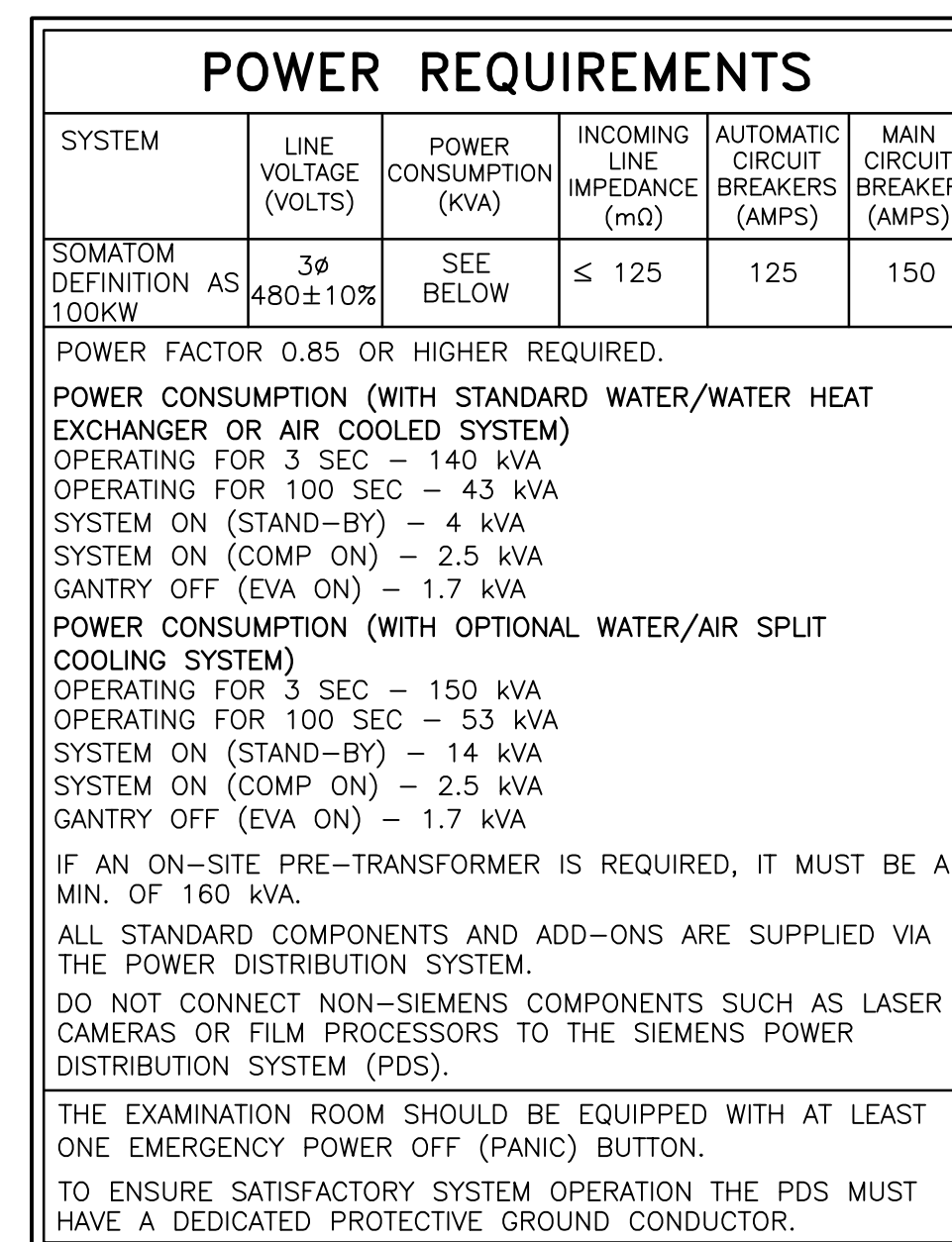
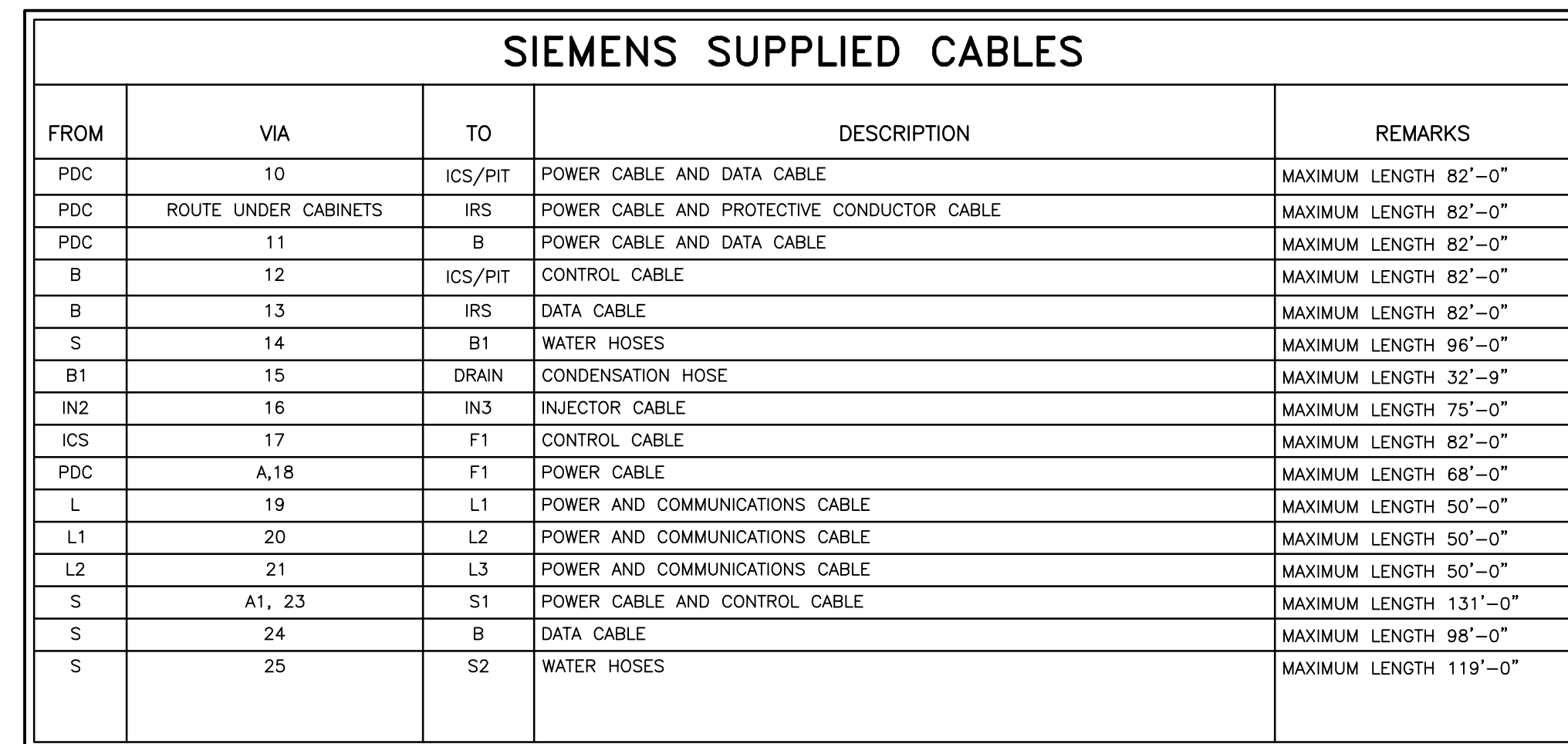
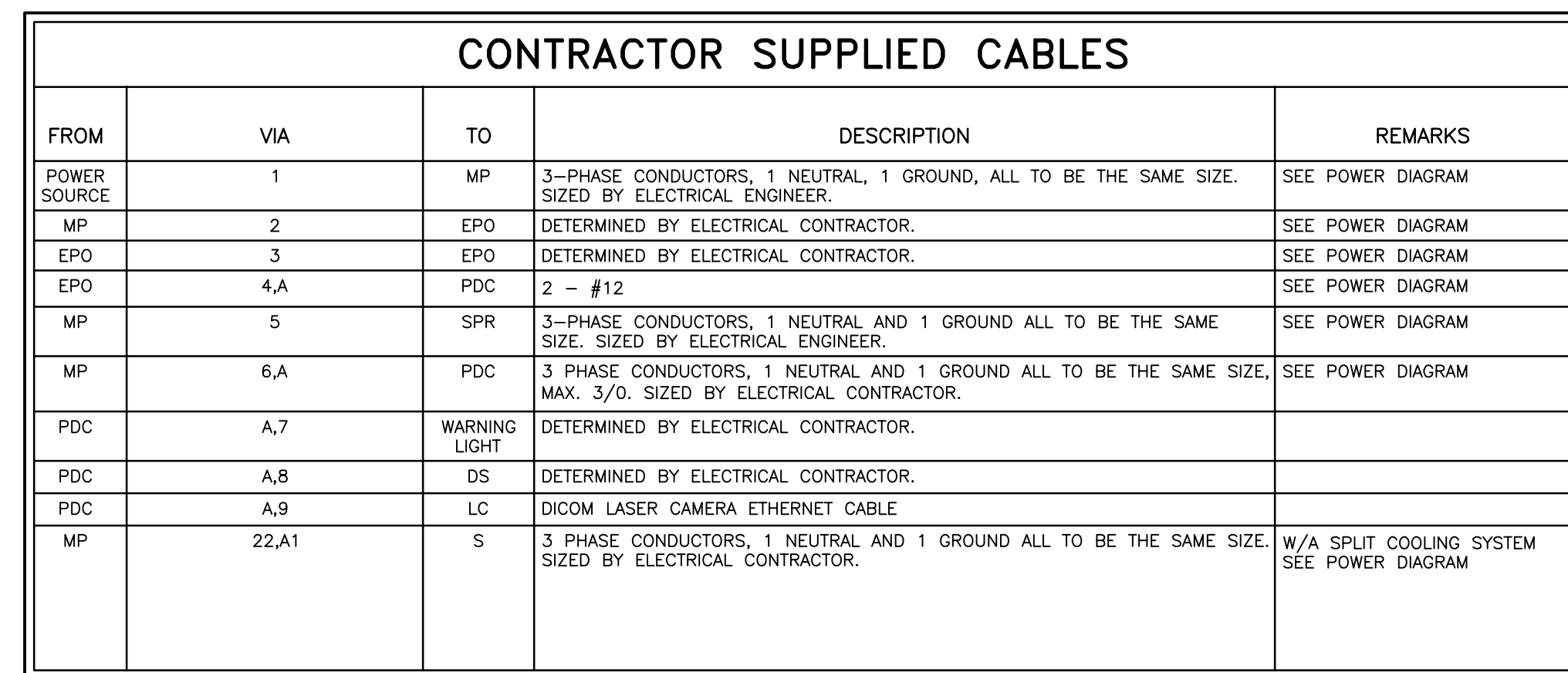
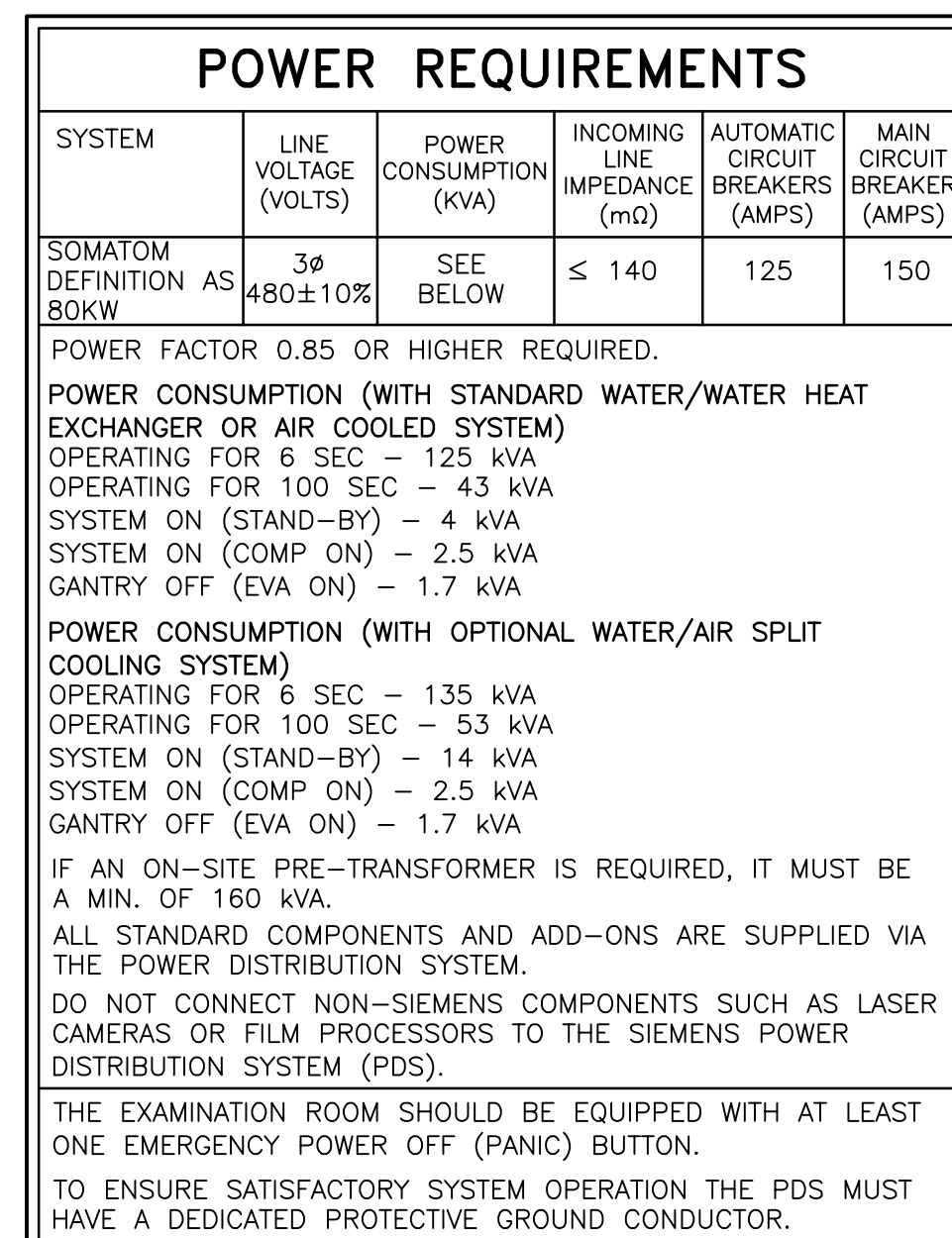
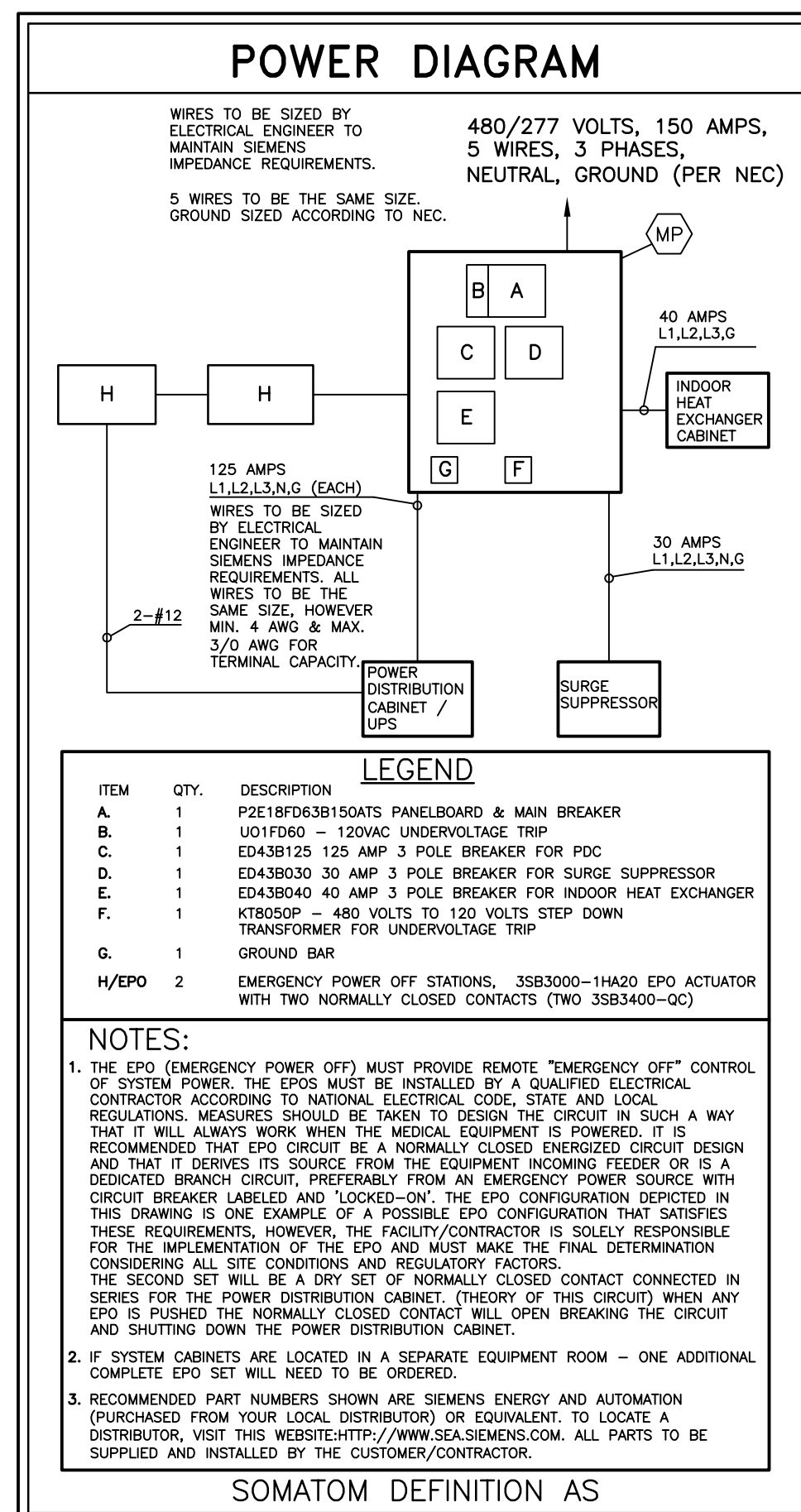
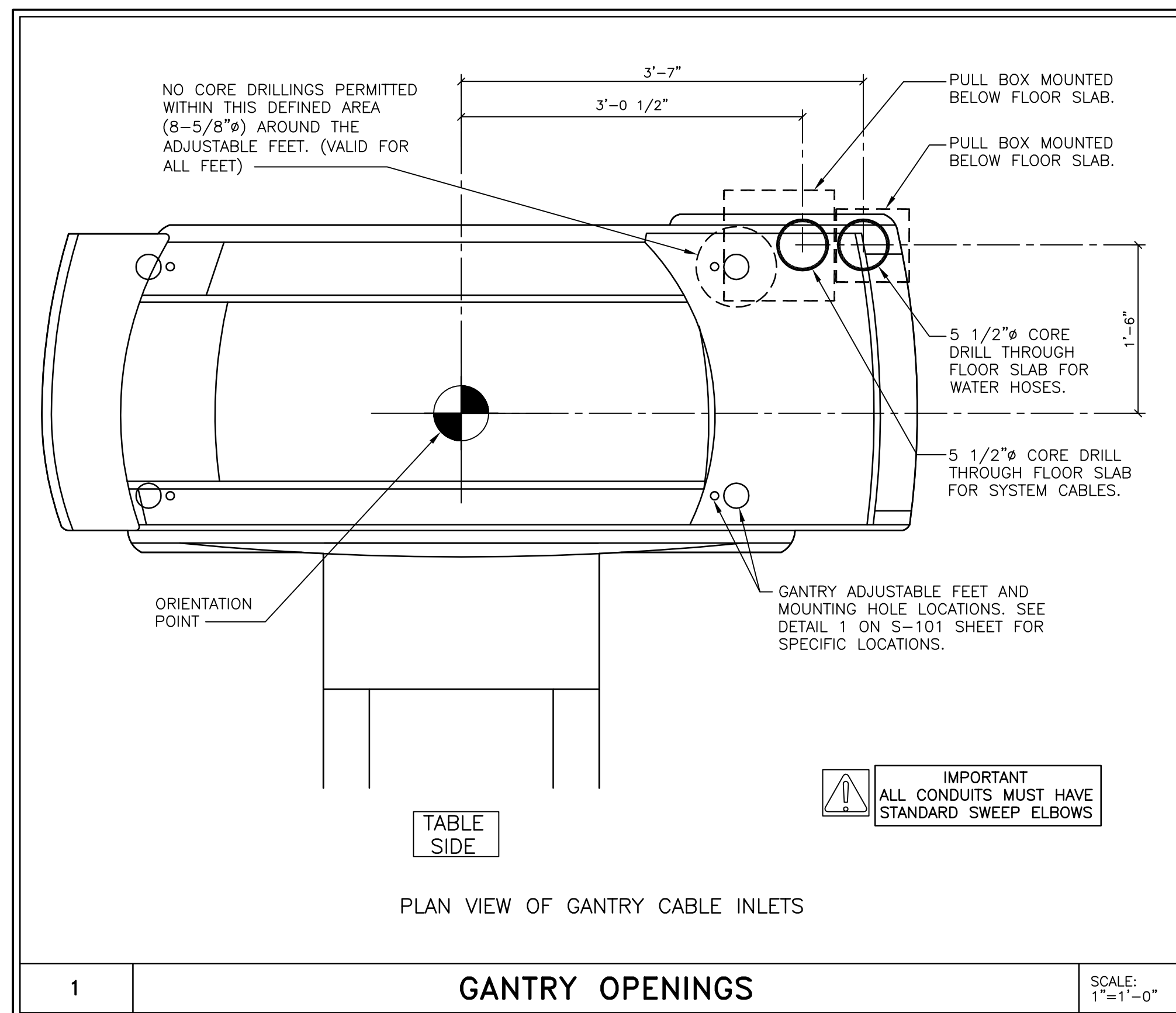
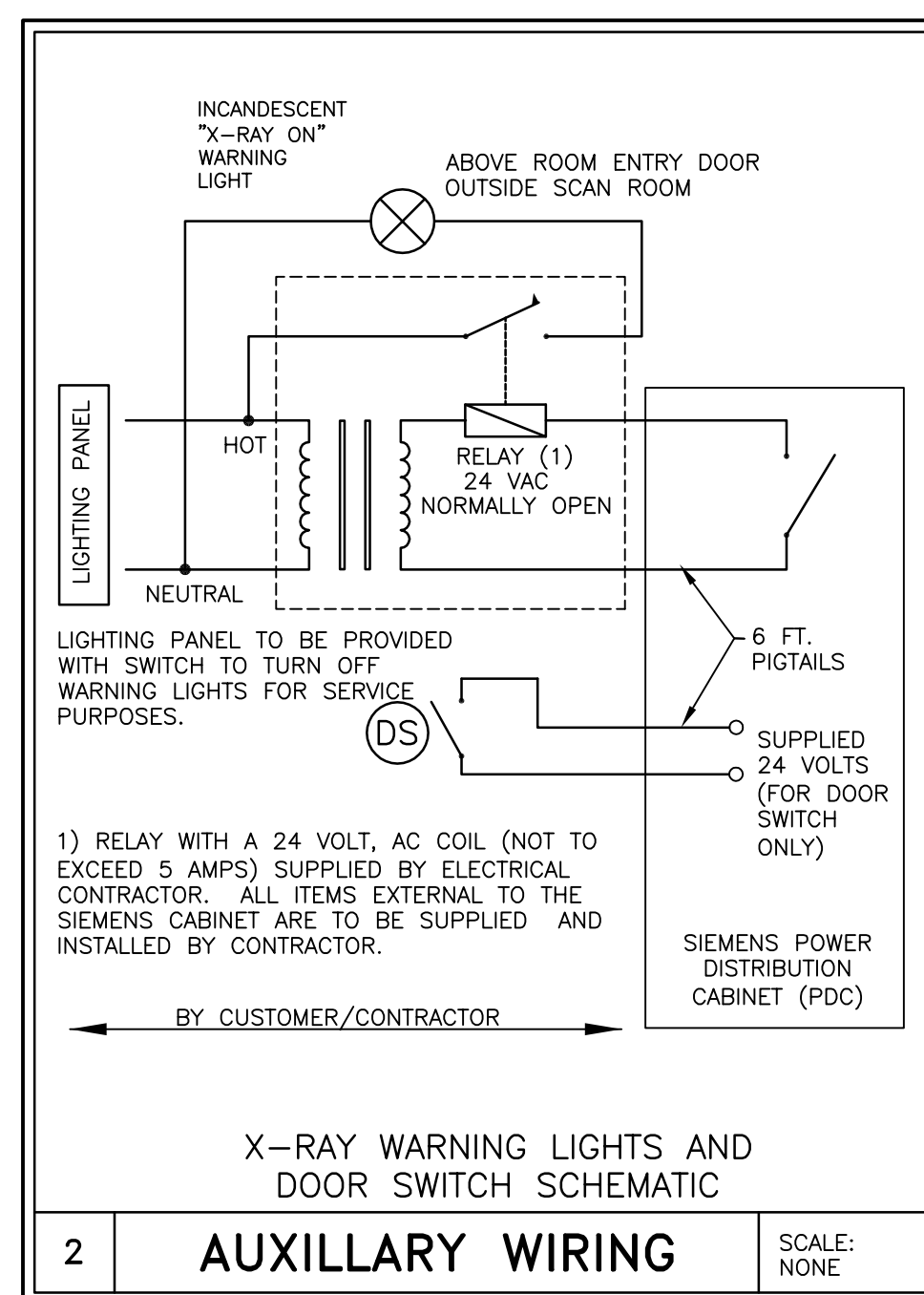
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DEFINITION AS 06/09/11



## ELECTRICAL DIMENSION PLAN

SCALE: 1/4" = 1'-0"



			<div>SIEMENS</div> <div>SOMATOM DEFINITION AS 20/40/64/128</div> <div>TYPICAL DRAWING</div>					
			<div>THE USE OR REPRODUCTION OF THIS TITLE BLOCK WITHOUT SIEMENS AUTHORIZATION WILL RESULT IN PROSECUTION UNDER FULL EXTENT OF THE LAW.</div> <div>ALL RIGHTS ARE RESERVED.</div>		<div>PROJECT #:</div> <div>08006</div>		<div>SHEET:</div> <div>E-102</div>	
<div>△</div>			<div>SHEET 6 OF 8</div> <div>DRAWN BY: L. BROBJORG</div>		<div>DATE: 06/09/11</div> <div>CHECKED:</div>			
<div>SYM</div>	<div>DATE</div>	<div>DESCRIPTION</div>						
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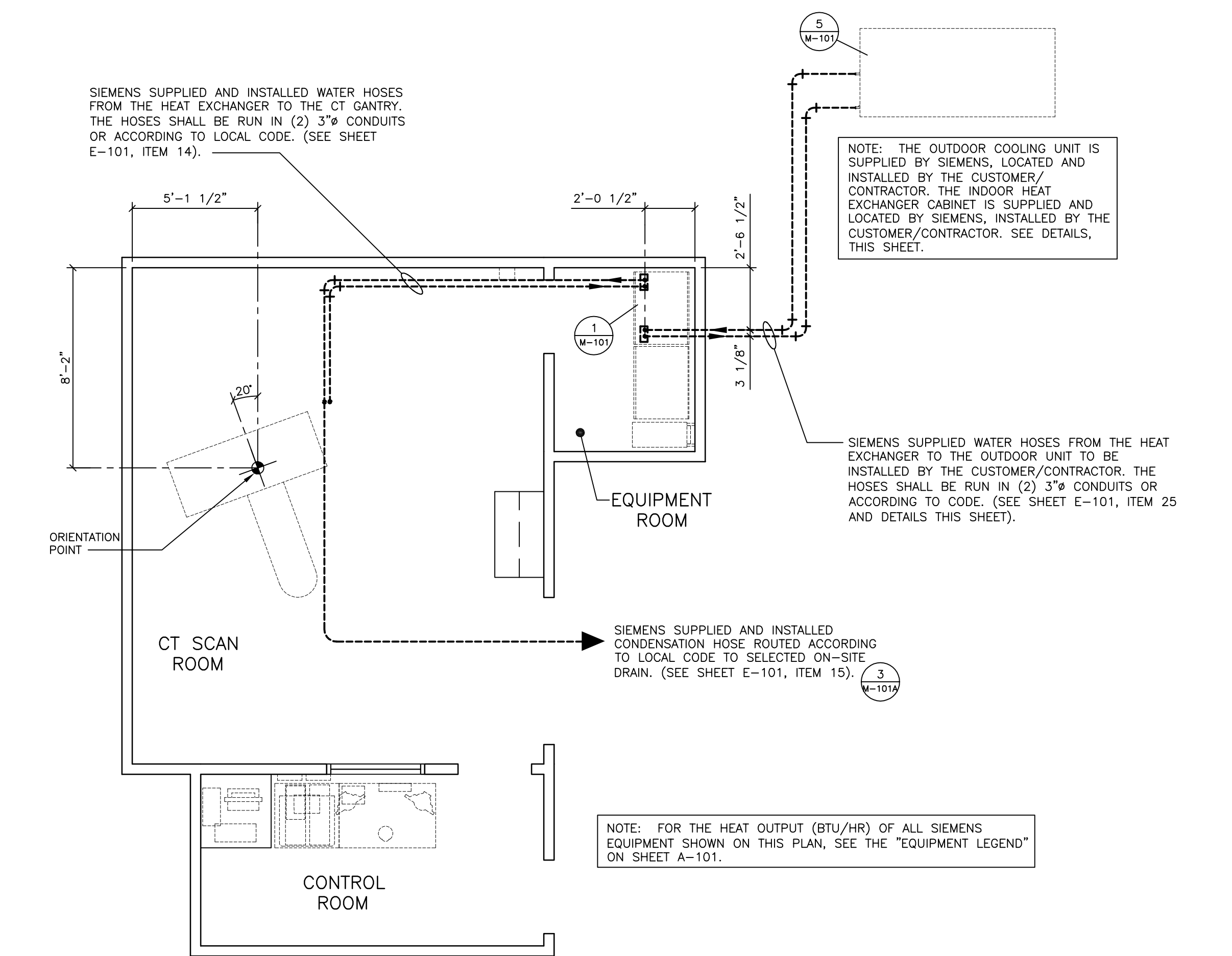
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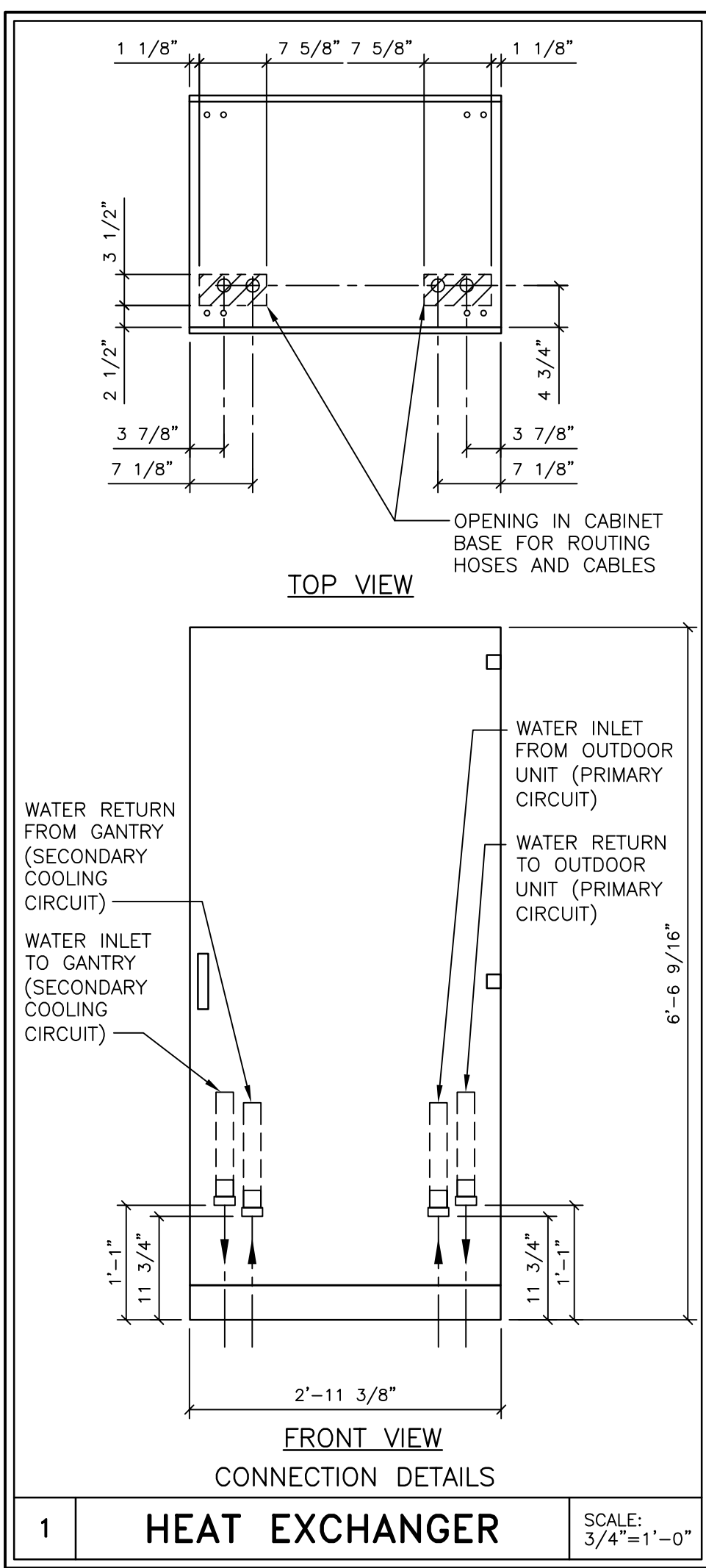
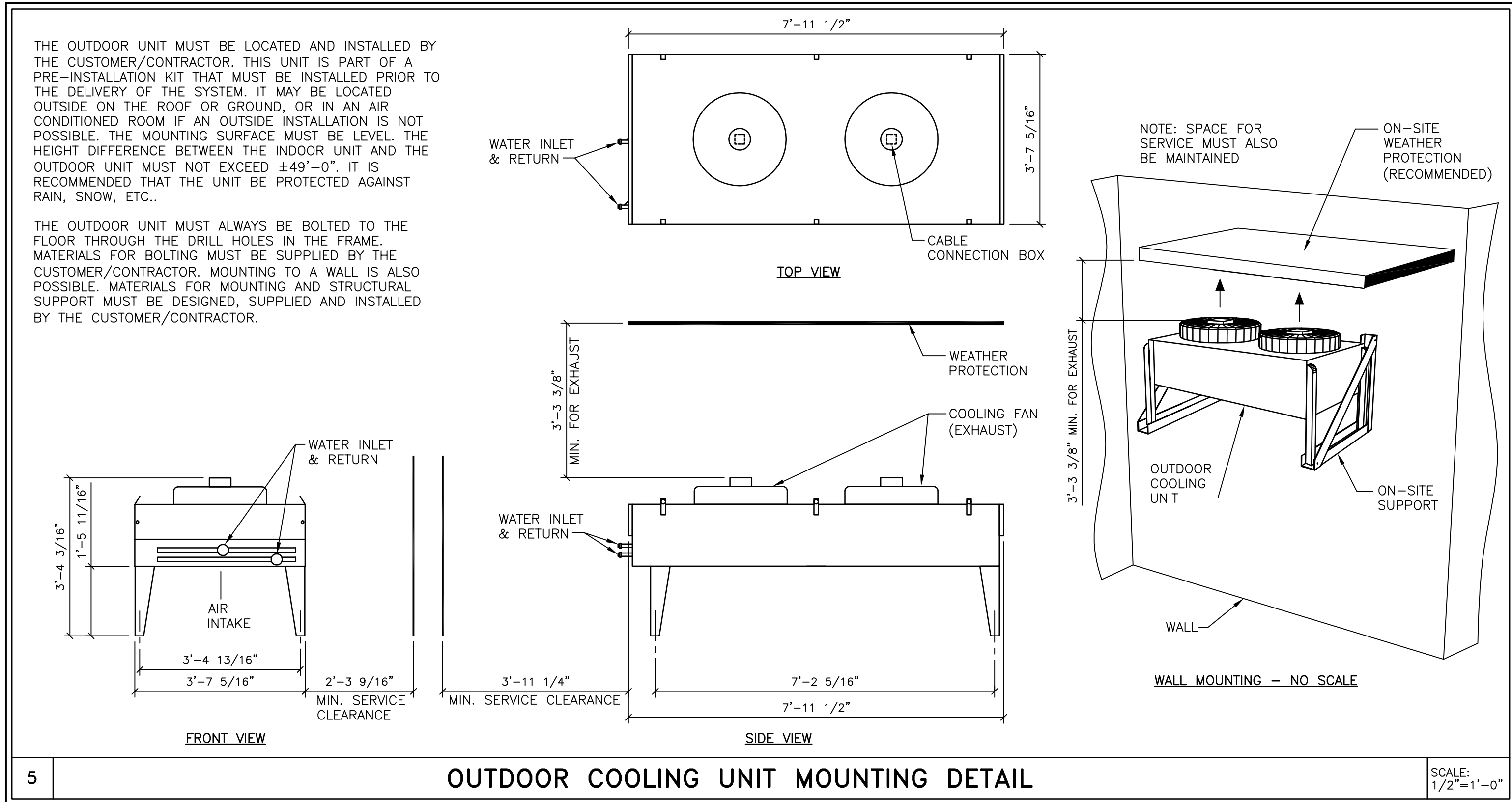
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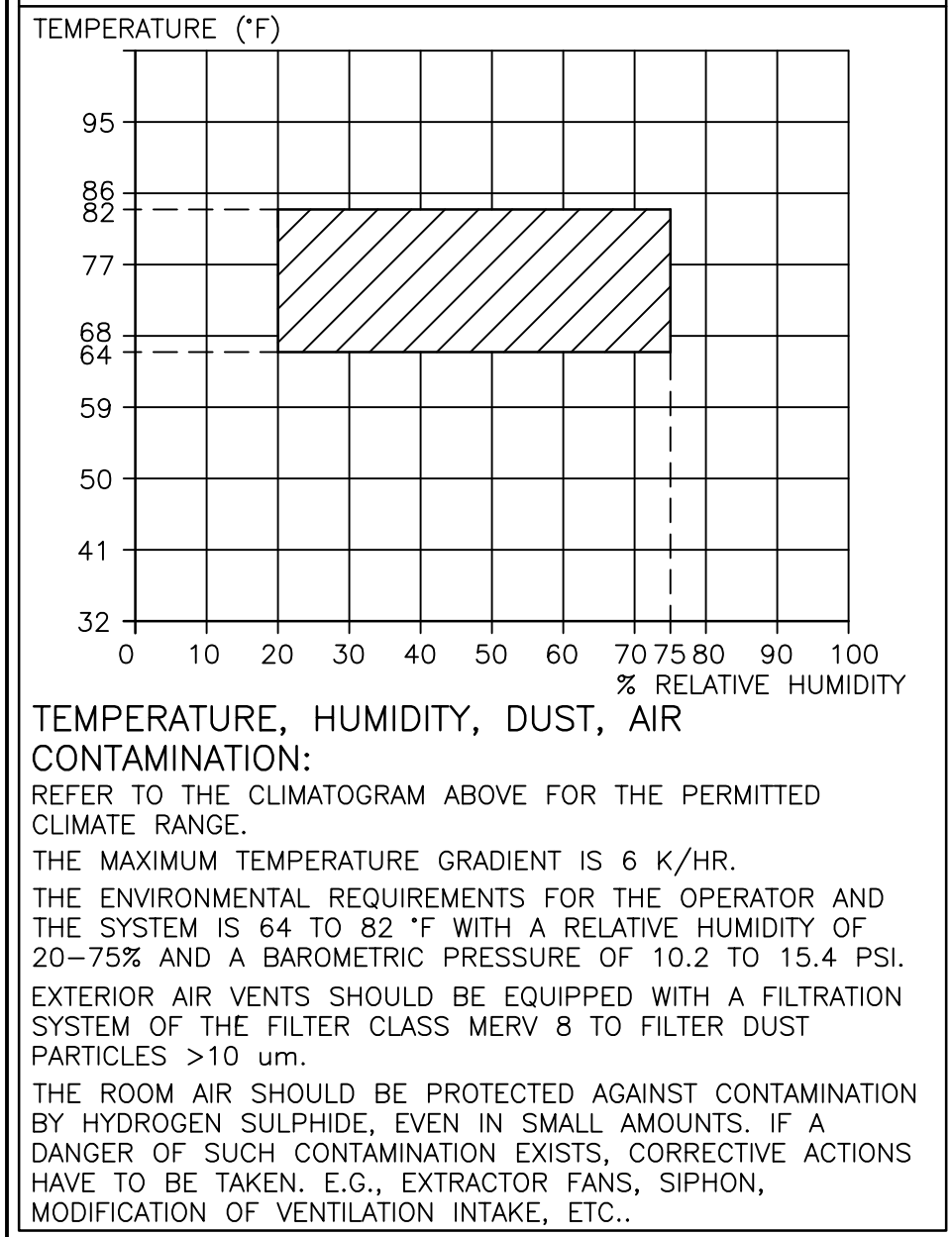


MECHANICAL PLAN - WATER/AIR SPLIT OPTION

SCALE: 1/4" = 1'-0"

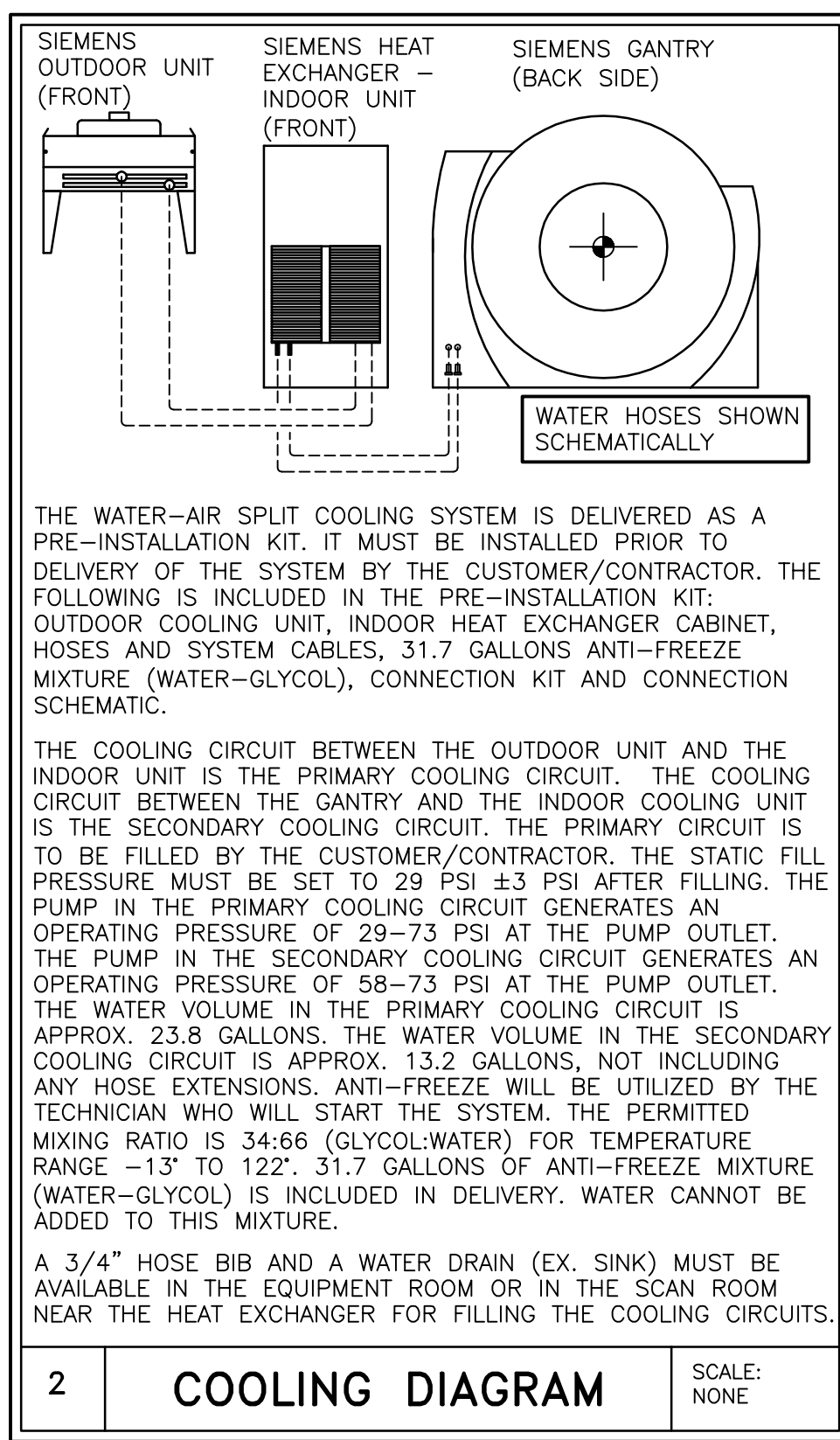


ENVIRONMENTAL REQUIREMENTS



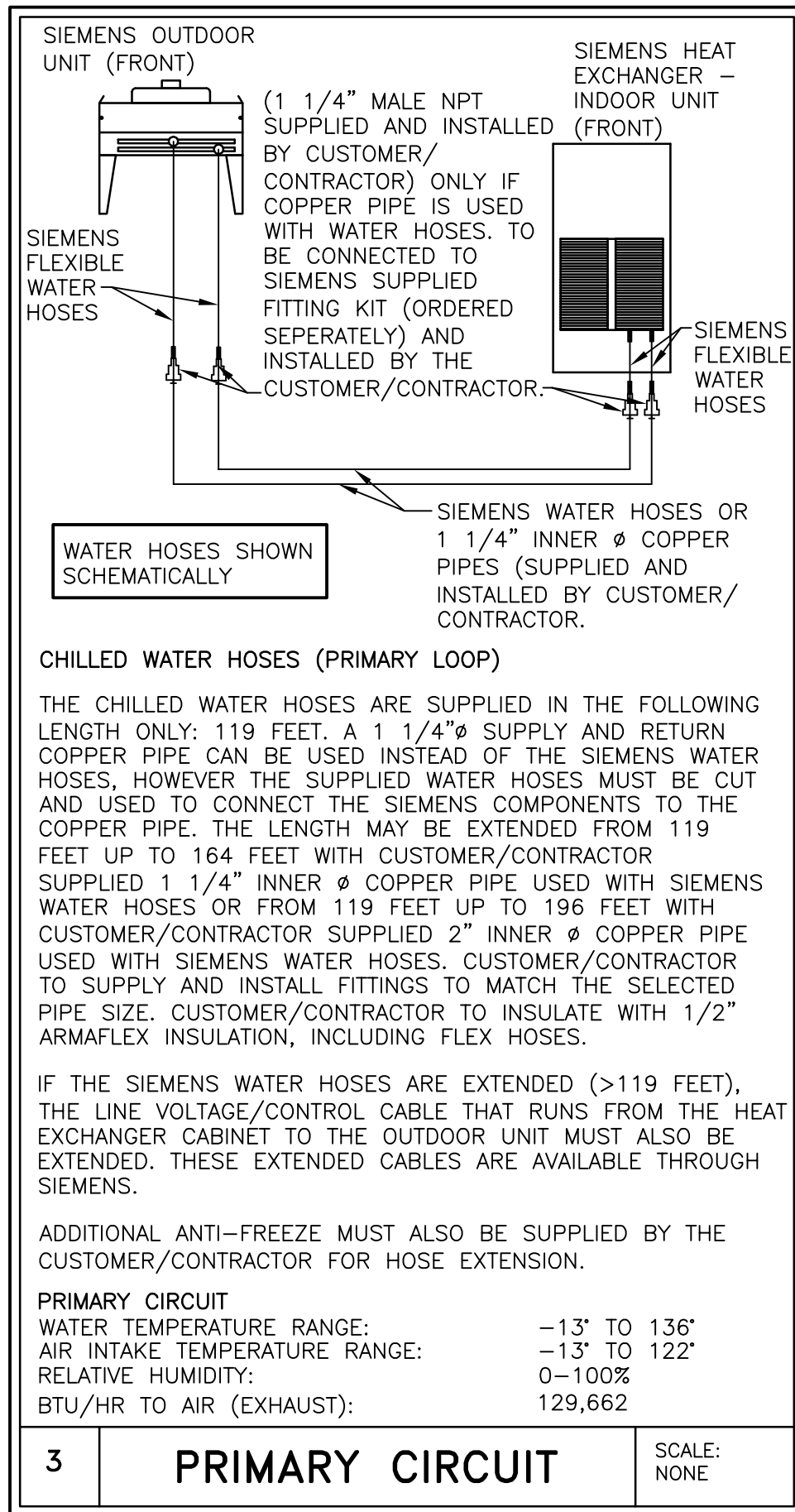
FINISHED ROOM HEIGHT

FOR CT GENTRY ONLY	MINIMUM 7'-6 9/16"
CAREVISION MONITOR/CEILING MOUNT	MIN. 8'-7 1/2" MAX. 11'-2 5/8"



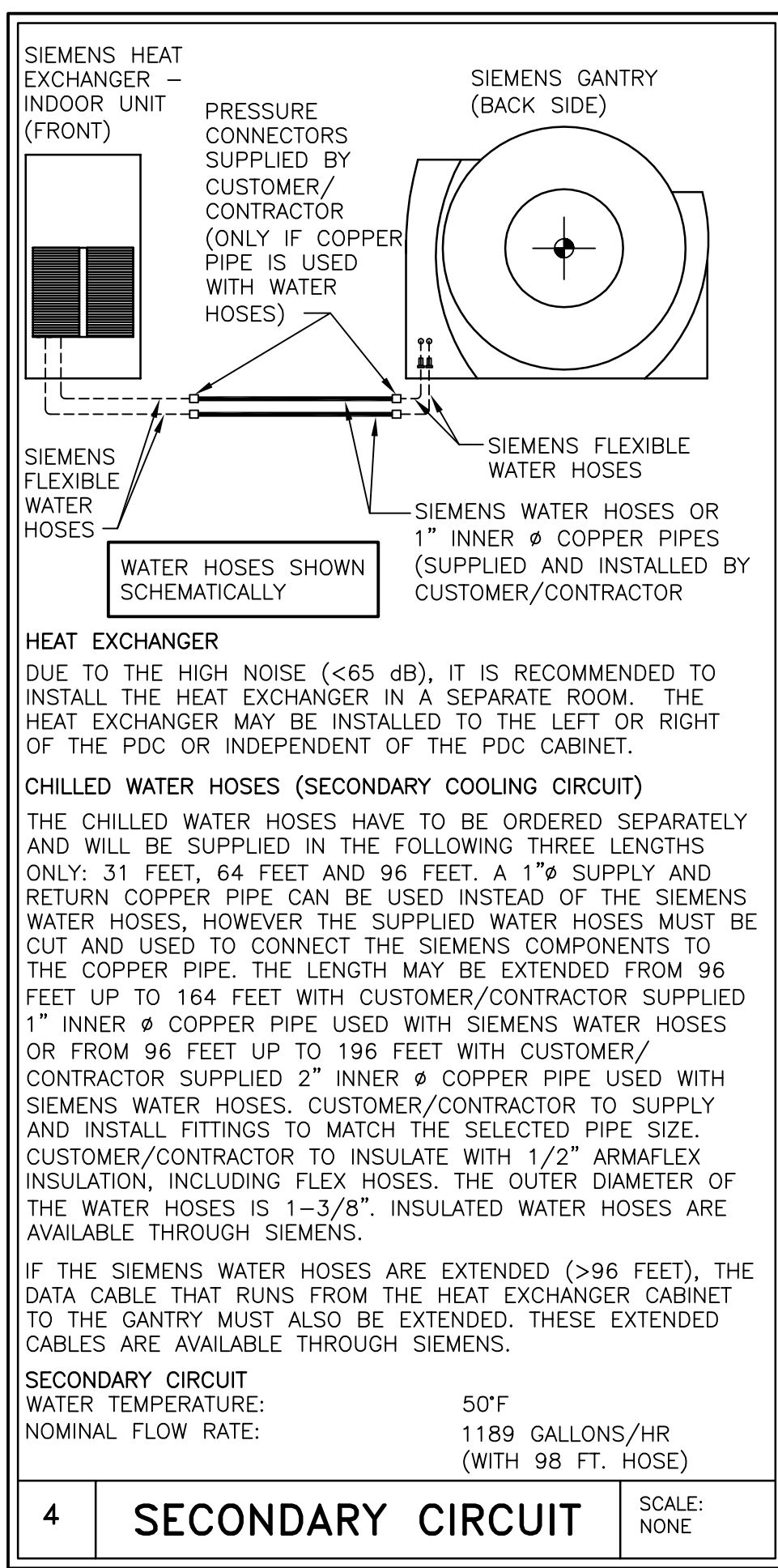
COOLING DIAGRAM

SCALE: NONE



PRIMARY CIRCUIT

SCALE: NONE



SECONDARY CIRCUIT

SCALE: NONE

TECHNICAL DATA

TEMPERATURE RANGE OF WATER	-13°F TO 136°F MAXIMUM (PRIMARY COOLING CIRCUIT)
	50°F (SECONDARY COOLING CIRCUIT)
AMBIENT AIR TEMPERATURE RANGE (AIR INTAKE)	-13°F TO 122°F MAXIMUM
FILTRATION	250 MICRONS
BTU/HR TO AIR (EXHAUST)	129,662

WATER QUALITY	
THE WATER MUST BE OF DRINKABLE QUALITY. IF THE WATER IS OF LESSER QUALITY A FILTER WITH A MESH OF 250 MICRONS IS REQUIRED IN THE PRIMARY INLET SUPPLIED BY THE CUSTOMER/CONTRACTOR.	
ANTI-FREEZE	
ANTI-FREEZE MAY BE ADDED TO THE PRIMARY COOLING CIRCUIT ONLY. BY THE TECHNICIAN WHO WILL START THE SYSTEM. THE PERMITTED MIXING RATIO IS 34:66 (GLYCOL:WATER) FOR TEMPERATURE RANGE -13° TO 122°F. 31.7 GALLONS OF ANTI-FREEZE MIXTURE (WATER-GLYCOL) IS INCLUDED IN DELIVERY. WATER CANNOT BE ADDED TO THIS MIXTURE.	

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**SIEMENS**  
**SOMATOM DEFINITION AS 20/40/64/128**  
TYPICAL DRAWING

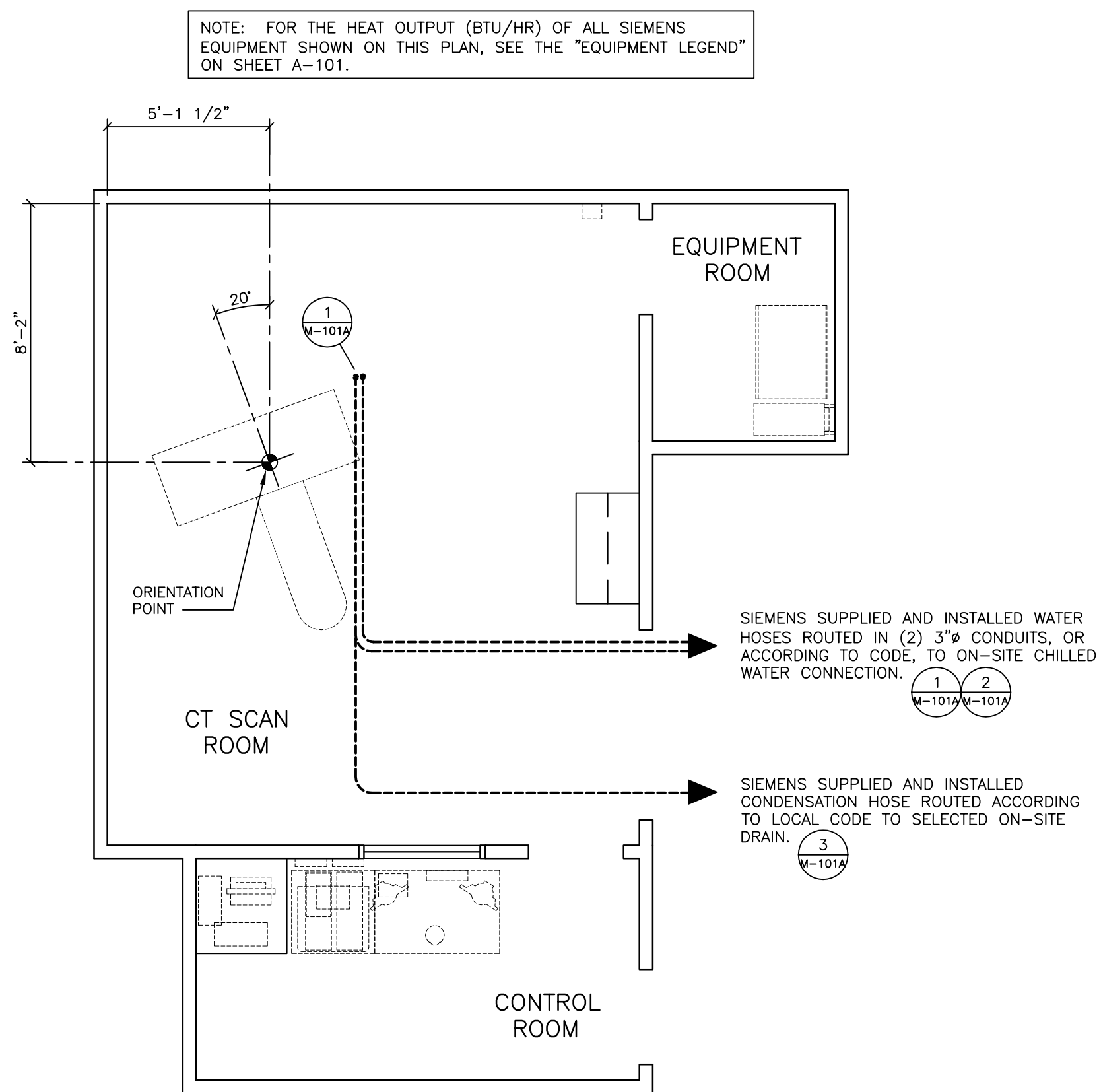
PROJECT #:	08006
SHEET 7 OF 8	DRAWN BY: L. BROBJORG
DATE: 06/09/11	CHECKED:

SHEET: **M-101**

SYMBOL	DATE	DESCRIPTION
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SCALE: AS NOTED	REF. #:
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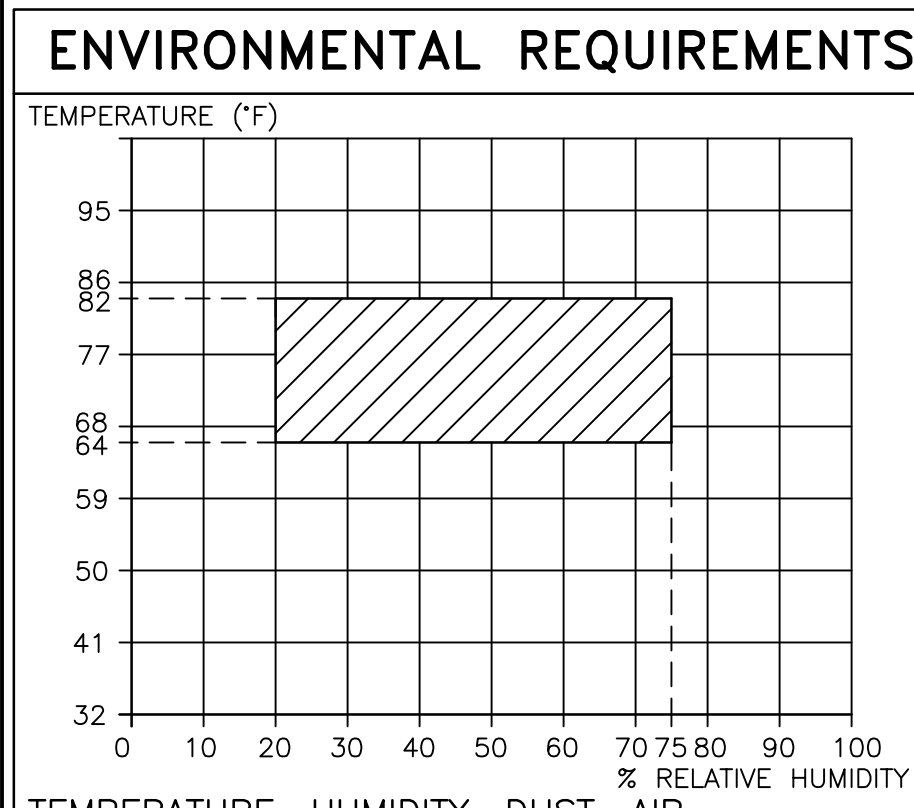




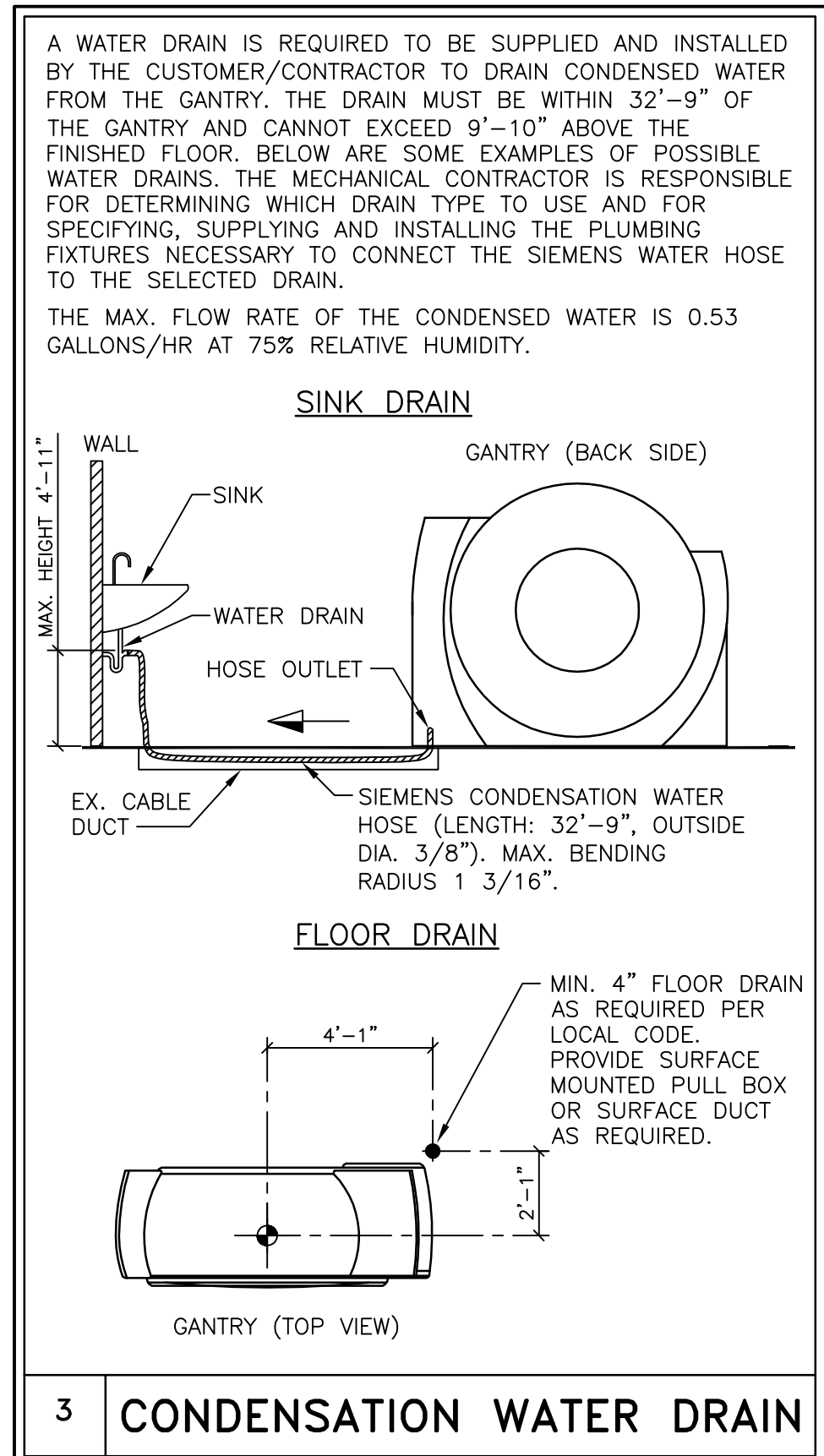
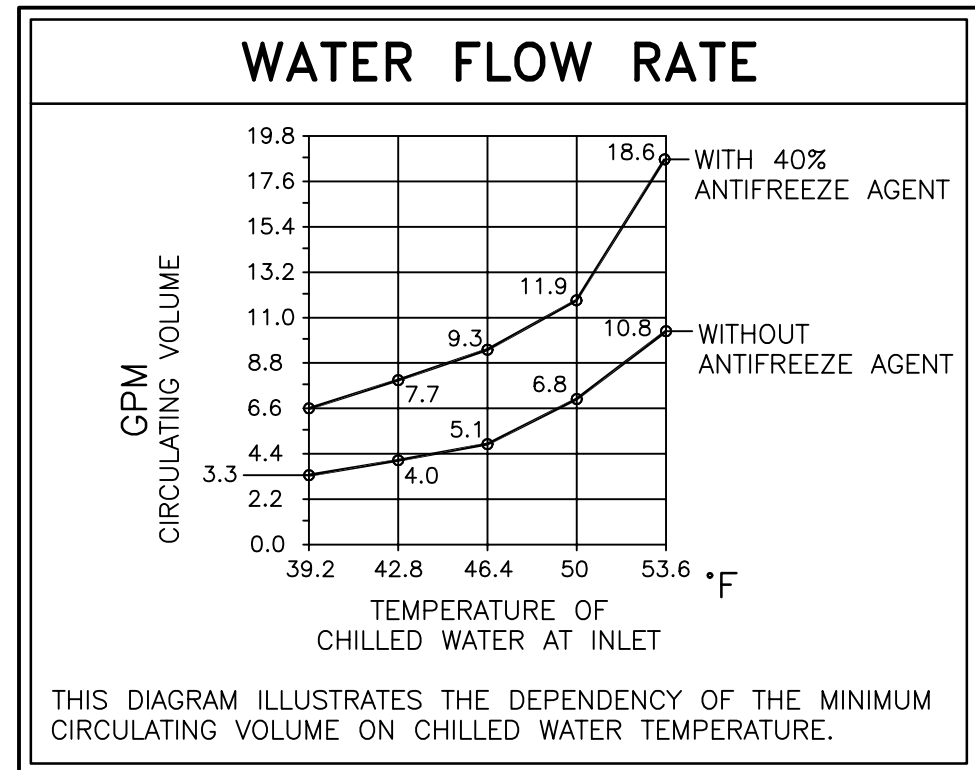
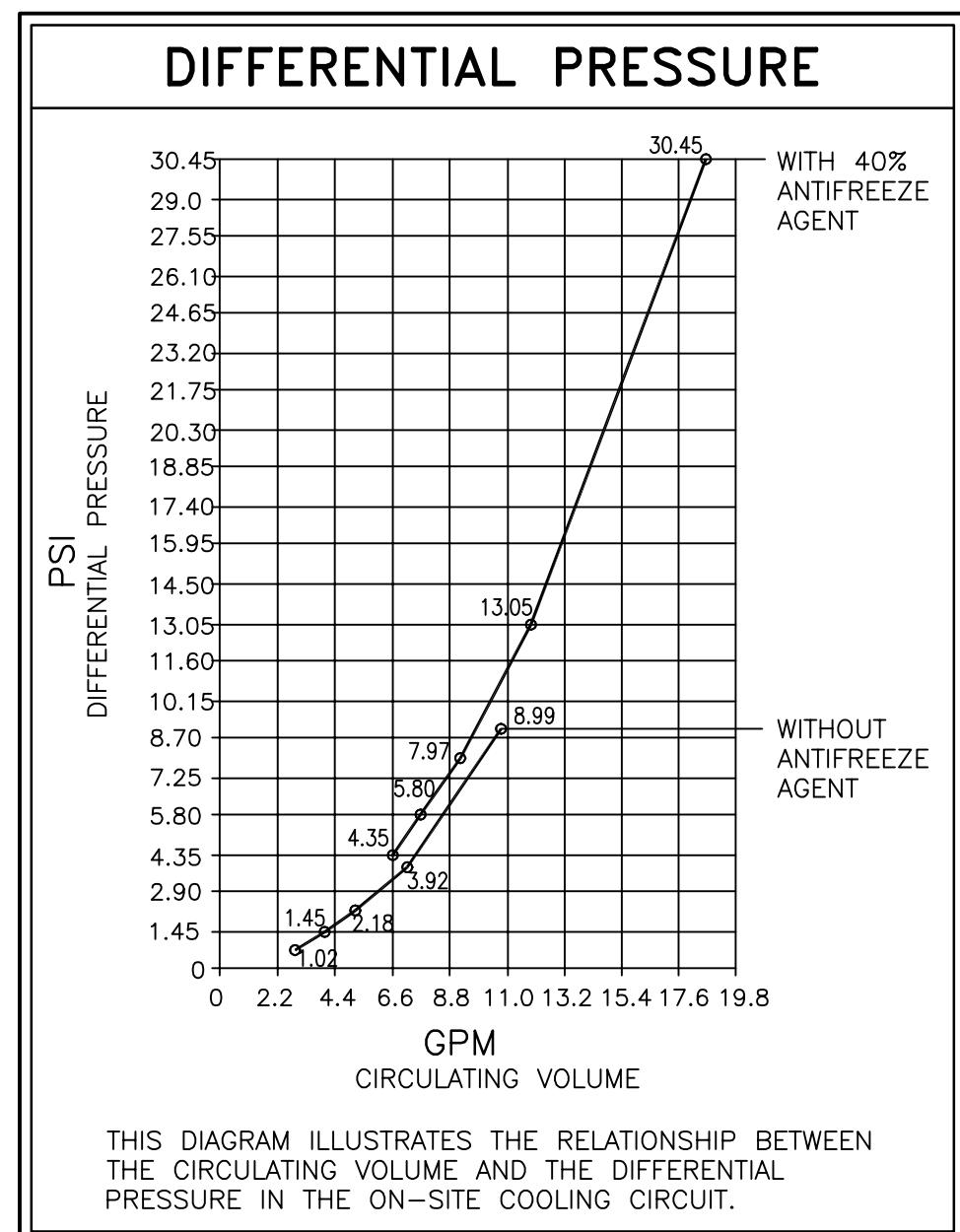
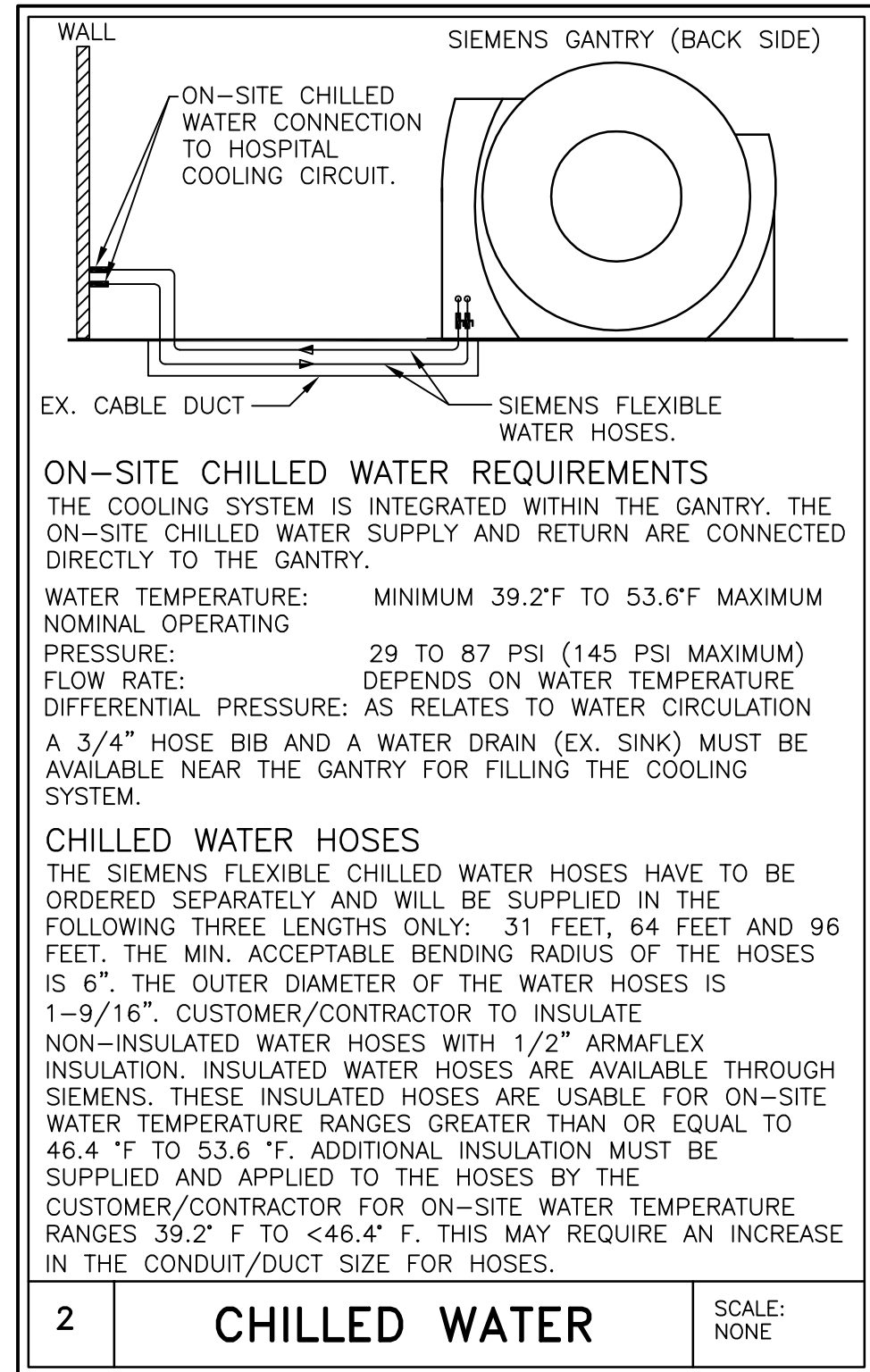
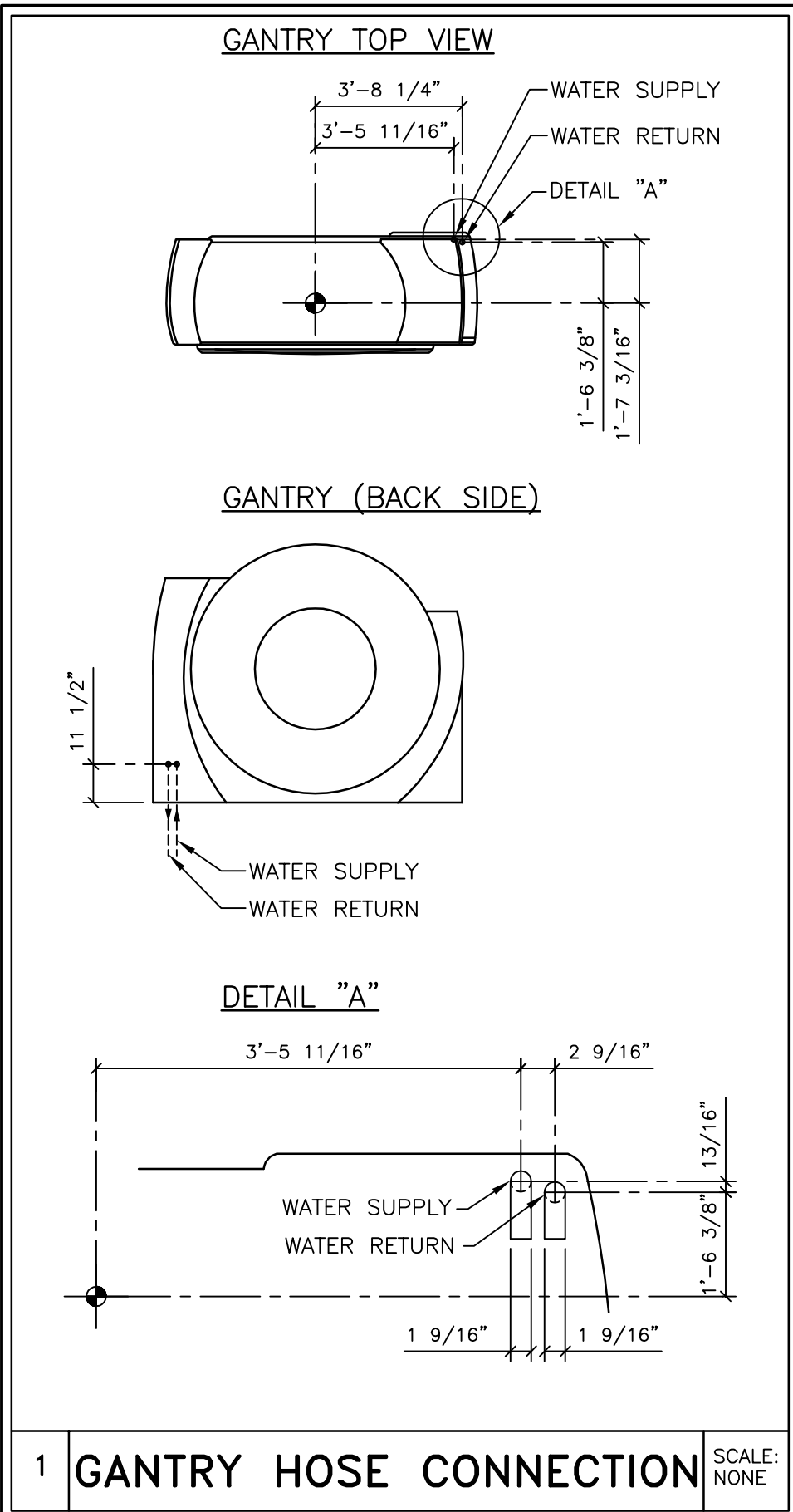
SCALE:  $1/4" = 1'-0"$

<h1>TECHNICAL DATA</h1> <div>(FOR AIR COOLED GENTRY ONLY)</div>	
AIR INTAKE RANGE OF AIR	MINIMUM 64.4°F TO 82.4°F MAXIMUM
TEMPERATURE GRADIENT (AIR INTAKE)	MAXIMUM 1 K/MINUTE MAXIMUM 6 K/HOUR MAXIMUM 4 K/WITHIN 24 HR (1)
BTU DISCHARGE TO THE AIR	40,946 BTU/HR
STAND-BY: WITH ROTATION WITHOUT ROTATION	11,951 BTU/HR 15,365 BTU/HR
AIR FLOW RATE (THROUGH THE GENTRY)	81,224 CU FT/HR
HUMIDITY (AIR INTAKE)	20-75 %
1) FROM "CHECK-UP" TO "CHECK UP" WHEN SWITCHING ON/OFF THE CT SYSTEM.	
<h2>AIR CONDITIONER UNIT</h2> <p>THE RATING CAPACITY OF THE ROOM AIR CONDITIONER HAS TO TAKE INTO ACCOUNT THE STRUCTURAL CONDITIONS (EX. WINDOWS, BUILDING &amp; ROOM THERMAL INSULATION, ROOM SIZE, ROOM VOLUME, ETC.) OF THE SCAN ROOM TO ENSURE THAT THE TEMPERATURE RANGE OF AIR NEEDED FOR THE SYSTEM IS MAINTAINED.</p>	

TECHNICAL DATA	
WATER SUPPLY RATE	SEE WATER FLOW RATE DIAGRAM
TEMPERATURE RANGE OF WATER	MINIMUM 39.2°F TO 53.6°F MAXIMUM
TEMPERATURE GRADIENT OF WATER	MAXIMUM 1 K/MINUTE
BTU DISCHARGE TO THE WATER	40,946 BTU/HR
NOMINAL OPERATING PRESSURE	29 TO 87 PSI (145 PSI MAXIMUM)
FILTRATION	250 MICRONS
DIFFERENTIAL PRESSURE	SEE DIFFERENTIAL PRESSURE DIAGRAM
<p><b>WATER QUALITY</b></p> <p>THE WATER MUST BE OF DRINKABLE QUALITY. IF THE WATER IS OF LESSER QUALITY A FILTER WITH A MESH OF 250 MICRONS IS REQUIRED IN THE ON-SITE INLET.</p> <p><b>ANTI-FREEZE</b></p> <p>AN ANTI-FREEZE AGENT MAY BE ADDED, BY THE TECHNICIAN WHO WILL START THE SYSTEM, TO THE ON-SITE CIRCUIT TO PROVIDE PROTECTION FOR TEMPERATURES TO -13°F WITH A MIXTURE OF 40% ANTIFREEZE. TO COMPENSATE FOR THE RESULTING REDUCTION IN COOLING CAPACITY, THE WATER FLOW RATE WILL HAVE TO BE INCREASED. WATER WITH ANTIFREEZE FROM THE ON-SITE CHILLED WATER MUST BE AT LEAST 39.2° F. ONLY WATER AT THIS TEMPERATURE MAY FLOW THROUGH THE WATER/WATER COOLING SYSTEM. ANTI-FREEZE TO BE SUPPLIED BY THE CUSTOMER/CONTRACTOR.</p>	



TEMPERATURE, HUMIDITY, DUST, AIR  
CONTAMINATION:  
REFER TO THE CLIMATOGRAM ABOVE FOR THE PERMITTED  
CLIMATE RANGE.  
THE MAXIMUM TEMPERATURE GRADIENT IS 6 K/HR.  
THE ENVIRONMENTAL REQUIREMENTS FOR THE OPERATOR AND  
THE SYSTEM IS 65 TO 82°F WITH A RELATIVE HUMIDITY OF  
20-75% AND A BAROMETRIC PRESSURE OF 10.2 TO 15.4 PSI.  
EXTERIOR AIR VENTS SHOULD BE EQUIPPED WITH A FILTRATION  
SYSTEM OF THE FILTER CLASS MERV 8 TO FILTER DUST  
PARTICLES  $\geq 10 \mu$ .  
THE ROOM AIR SHOULD BE PROTECTED AGAINST CONTAMINATION  
BY HYDROGEN SULPHIDE, EVEN IN SMALL AMOUNTS, IF A  
DANGER OF SUCH CONTAMINATION EXISTS, CORRECTIVE ACTIONS  
HAVE TO BE TAKEN. E.G., EXTRACTOR FANS, SIPHON,  
MODIFICATION OF VENTILATION INTAKE, ETC.,



FINISHED ROOM HEIGHT	
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					<div>SHEET 8 OF 8</div>	<div>DRAWN BY: L. BROBJORG</div>
SYM	DATE	DESCRIPTION	<div>SCALE: AS NOTED</div>	<div>REF. #:</div>	<div>DATE: 06/09/11</div>	<div>CHECKED:</div>
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